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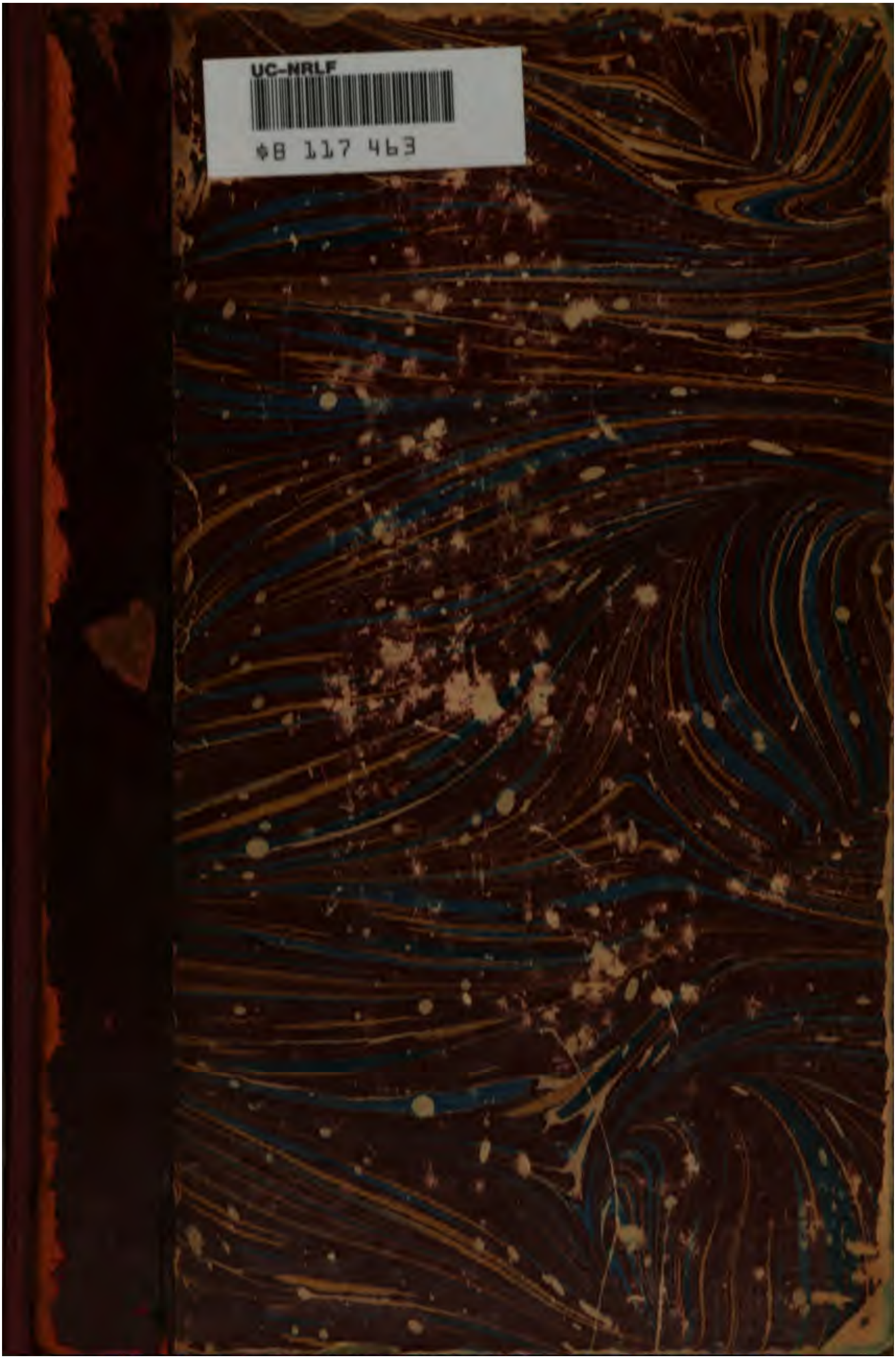

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E. Kant.

LOGIC

FROM THE GERMAN

OF EMMANUEL KANT, M. A.

DOCTOR AND LATE REGIUS PROFESSOR OF PURE PHILOSOPHY IN THE UNIVERSITY OF KÖNINGSBERG, AND MEMBER OF THE ROYAL ACADEMY OF SCIENCES OF BERLIN;

TO WHICH IS ANNEXED

A Sketch of his Life and Writings:

By JOHN RICHARDSON,

AUTHOR OF A CRITICAL INQUIRY INTO THE GROUNDS OF PROOF FOR THE EXISTENCE OF GOD, AND INTO THE THEODICY.

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PREFACE

BY THE TRANSLATOR.

It is not augmenting the sciences, but disfiguring them, when their boundaries are allowed to encroach on one another. For which reason, and as logic is a science, wherein nothing is fully shewn and strictly proved but the formal rules of all thinking, and as we by consequence abstract in it from all objects of knowledge, as well as from their difference, our author has left us his logic free from every extraneous admixture of either ontological, or anthropological, or psychological, or metaphysical matter.

Whoever has but a clear and distinct conception of the proper nature of this science, will soon discover the great difference between Kant's Logic and all former treatises on the same subject, not only by its being purer and more systematical, but, for all its scientific strictness of method, by its being simpler, and divested of many of the tinsel trappings of mood and of figure. The translator therefore conceives himself warrantable in presenting it to the English public.*

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* This Treatise on Logic, which is intended for a manual for lectures, is a posthumous work, and it is the editor Gottlob

He trusts too, that candid and competent judges (unfortunately not a very numerous body in any nation) will not repudiate, on a slight review, a system, which is purged of much useless, though ostentatious, scholastic subtilty, and which is now taught and flourishes in all the protestant universities of Germany. As to his labour (a very secondary consideration), by the way, it will, if it or any light that he may have thrown on a science (the critical philosophy), which he has been studying for years both in Germany and at home, shall hereafter be found to deserve the approbation of those judges, be amply requited.

Benjamin Fesche (doctor and private teacher of philosophy in the university of Koningsberg, fellow of the Learned Society of Francfort on the Oder, disciple, follower, and friend of Kant) whom we have to thank for having thus faithfully published his illustrious master's manuscript. The doctor has promised us his Metaphysic also, which he likewise has in manuscript in Kant's own writing, and which, the moment it comes to hand, the translator intends to turn and to publish; when we shall have something systematical and complete of this incomparably great man's own, and not be any longer troubled with scraps, mutilated extracts, and imperfect quotations, which cannot convey his sense or spirit, and only serve to deceive the public by giving them a false notion of his method of philosophising, by leading those totally ignorant of the principles of his system to prattle superficially of his profound doctrine, and by making a mere dogmatic jargon of his sublime science.

When the arts and the sciences are improved and enlarged, many more words, than those which sufficed in their infancy, become necessary, *Nulli unquam, qui res ignorarent, nomina, quibus eas exprimerent, quæsierunt.* The author found the technical or rather the scientific words and terms of the German language inadequate to his method of critical philosophising, and was consequently obliged to coin new ones. The translator of course is reduced to the same necessity in English; for that language is not less copious than our vernacular tongue; and circumlocution or a periphrastical style tends greatly to enfeeble philosophical reasoning.

Should any critic, however, or philosopher, whose province it more immediately is, deign to suggest words or terms more expressive of the meaning, than his may be, he, as his sole aim, in clothing his author's thoughts in an English dress, is, to render their sense faithfully without any affectation of novelty, and to contribute his mite to propagate and diffuse useful and sublime knowledge, will, should this work have the fortune to survive the present edition, then adopt those more apposite words and terms with gratitude and pleasure; for he, though in this instance little more than a mere translator, is far above logomachy, or a dispute about words.

True logic (says Watts) does not require a long detail of hard words to amuse mankind, and to puff up the mind with empty sounds and a pride of false learning; yet some distinctions and terms of art are necessary to range every conception in its proper class, and to keep our thoughts from confusion.

Though we may and in fact do syllogize both in conversation and in common writings, it is, like Mr. Jourdain (in Moliere's *Bourgeois Gentilhomme*), who spoke in prose for more than forty years, without knowing it.

An acquaintance with the school form of ratiocination, however, is indispensable to every man not only of science, but of a liberal education. The world (continues the doctor) is now grown so wise as not to suffer this valuable science to be engrossed by the schools. In so polite and so knowing an age, every man of reason will covet some acquaintance with logic, since it renders its daily service to wisdom and to virtue, and is subservient to the affairs of common life, as well as to the sciences.

In short, the study of the species of logic contained in this compendium should, in the academical instruction, precede the study of all philosophy, like a quarantine (so to say), which the disciple, who has a mind to go out of the land of prejudice and error into the territory of more enlightened reason and of the sciences, must perform.

It is to be hoped, that Kant's accurate and profound method of philosophising, a small specimen

of which is exhibited in this work, will meet with a better reception from our philosophers, than Harvey's doctrine did, at the beginning, from our physicians. For Hume relates, that no physician in Europe, who had reached the age of forty, ever, to the end of his life, adopted Harvey's doctrine of the circulation of the blood, and that his practice in London diminished extremely from the reproach incurred by this great and signal discovery.—So slow is the progress of truth in every science, even when not opposed by either factious or superstitious prejudices!—" So slow
The growth of what is excellent; so hard
T'attain perfection in this nether world!"

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INTRODUCTION.

I.

Conception of Logic.

Every thing in nature, as well in the inanimate as in the animated world, happens or is done according to rules, though we do not always know them. Water falls according to the laws of gravitation, and the motion of walking is performed by animals according to rules. The fish in the water, the bird in the air, moves according to rules. All nature, in general, is nothing but a coherence of phenomena according to rules; and there is no where any want of rule. When we think we find that want, we can only say that, in this case, the rules are unknown to us.

The exercise of our powers too takes place according to certain rules, which we observe without a knowledge of them at first, till we attain it by degrees by essays and a longer use of our powers, nay, make them (the rules) so easy to ourselves at last, that we have great difficulty to think of them in the abstract. Universal grammar, for instance, is the form of a language in general. But we speak without knowing grammar; and he, who speaks without knowing it, has a grammar and speaks according to rules, of which he is not sensible.

The understanding in particular, like all other powers in general, is bound in its operations to rules, which we can investigate. Yes, the understanding is to be considered as the source and the faculty of conceiving of rules in general. For, as the sensitivity, or the sensitive faculty (*sensualitas**), is the faculty of intuitions, the understanding is that of thinking, that is to say, of reducing the representations of the senses to rules. It is therefore desirous of looking for rules, and satisfied when it has found them. The question then is, as the understanding is the source of rules, on what rules it proceeds itself.

For there is not the least doubt, but we can, neither think, nor use our understanding otherwise, than according to certain rules. But we can think of these rules again by themselves, that is, we can conceive of them without their application, or in the abstract. What are these rules?

All the rules, according to which the understanding proceeds, are, either necessary, or contingent; The former are those, without which no use of the understanding would be possible; the latter those, without which a certain determinate use of it would not take place. The contingent rules, which depend upon a determinate object of cognition, are as manifold as the objects themselves. For example, there is a use of the understanding in the mathematics, in metaphysics, in moral philosophy, &c. The rules of this particular determinate use of the understanding in the aforesaid sciences are contingent; because it is contingent, whether we think of this or of that object to which these particular rules have reference.

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* As the word sensuality has degenerated from its original meaning in our language, we crave leave to substitute the word Sensitivity to express the intuitive faculty.

But, when we set aside all the cognition, which we must borrow from the objects merely, and reflect entirely upon the use of the understanding in general, we discover those rules of it, which are absolutely necessary in every respect and without regarding any particular objects of thinking; because without them we could not think at all. Hence can they be known *à priori*, that is, independently of all experience; because they comprise, without distinction of objects, merely the condition of the use of the understanding in general, whether it (the use) be pure or empirical. And hence it follows, that the universal and the necessary rules of thinking in general can regard its form merely, by no means its matter. Consequently the science, which comprehends these universal and necessary rules, is merely a science of the form of the cognition of our understanding, or of thinking. And we can frame to ourselves an idea of the possibility of a science of that sort, in the same manner as that of a universal grammar, which contains nothing more than the bare form of language in general, without words that belong to the matter of language.

This science of the necessary laws of the understanding and of reason in general, or of (what amounts to the same thing) the mere form of thinking in general, we name Logic.

As a science, which extends to all thinking in general, without regarding objects, as the matter of thinking, Logic is,

1, to be considered as the foundation of all the other sciences, and as the propedeytic (pre-exercitation) of all use of the understanding. But it cannot, because of its totally abstracting from all objects,

2, be an organon of the sciences.

By an organon we understand the direction how a certain cognition is to be brought about. But, thereto it is required, that we previously know the object of the cognition which is to be produced according to certain rules. An organon of the sciences therefore is not mere logic, because it gives to presuppose the exact knowledge of the sciences, of their objects, and of their sources. The mathematics, for instance, as a science which comprises the ground of the enlarging of our cognition with respect to a certain use of reason, are an excellent organon. Whereas, logic, as it, the universal propedeytic of the use of the understanding and of reason in general, must not be made to go into the sciences and to anticipate their matter, is but a universal art of reason (*canonica Epicuri*) to make cognitions in general suitable to the form of the understanding, and consequently in this view only to be denominated an organon, which however serves, not for the enlarging, but merely for the judging and the regulating of our knowledge.

3. As a science of the necessary laws of thinking, without which laws no use of the understanding or of reason has place, and which are by consequence the sole conditions, on which the understanding can agree with itself or be consistent,—the necessary laws and conditions of its right use—logic, however, is a canon. And it, as a canon of the understanding and of reason, must of course not borrow principles, either from any science, or from any experience whatever; it must comprehend nothing but laws *à priori*, which are necessary and appertain to the understanding in general.

Some logicians presuppose psychological principles in logic. But to introduce such principles as those into it, is just as absurd as to take moral philosophy from life. Were we to take principles from psychology, that is, from the observations on our understanding, we should but see how thinking goes on, and how it is under the various subjective impediments and conditions; this would consequently lead to the knowledge of merely contingent laws. In logic, however, the inquiry is after, not contingent, but necessary rules; not how we think, but how we are to think. Hence must the rules of logic be taken, not from the contingent, but from the necessary use of the understanding, which is found in us without all psychology. In logic we want to know, not how the understanding is and thinks, and how it has hitherto proceeded in thinking, but how it shall proceed in thinking. It is to teach us the right use of the understanding, that is, its use agreeing with itself.

From the foregoing explication of logic we may derive the other essential properties of this science, that it is,

4, a science of reason as to the matter, not as to the mere form; because its rules are not taken from experience, and because it has reason also for its object. Logic, therefore, is a self-cognition of the understanding and of reason, not however as to their faculties with regard to objects, but entirely as to the form. In logic, we would not ask, what does the understanding know, and how much can it know; or how far does its cognition go? For that were self-cognition with regard to its material use, and consequently belongs to metaphysic. In logic there is but the question, how does the understanding know itself?

As a rational science, as to both the matter and the form, logic finally is,

5, a doctrine, or demonstrated theory. For, as it is occupied, not about the common and, as such, merely empirical use of the understanding and of reason, but entirely about the universal and the necessary laws of thinking in general, it depends upon principles, *à priori,* from which all its rules can be derived and proved to be that, to which all cognition of reason must be conformable.

By logic's being, as a science *à priori* or as a doctrine, to be held a canon of the use of the understanding, it is essentially distinguished from esthetic which, as mere criticism of taste, has not a canon (a law), but only a *norma* (a pattern, or rule merely for judging), which consists in universal agreement. Esthetic contains the rules of the agreement of cognition with the laws of the sensitive faculty; logic, on the other hand, the rules of the agreement of cognition with the laws of the understanding and of reason. That has but empirical principles and of course can never be a science or a doctrine, provided that we understand by a doctrine a dogmatical instruction on principles *à priori,* in which every thing is known by the understanding without any other information received from experience, and which gives us rules, whose observance yields the desired perfection.

Many, particularly orators and poets, have attempted to reason on taste, but never been able to give a decisive judgment on it. Baumgarten, the philosopher, has formed a plan of an esthetic as a science. But Home has distinguished the esthetic righter by the appellation of Criticism, as that does not give any rules *à priori*, which determine the judgment sufficiently, like logic, but takes its rules *à posteriori*, and renders the empirical laws, according to which we know the more imperfect and the more perfect (beautiful), more general by comparison only.

Logic, then, is more than mere criticism; it is a canon, which afterwards serves for a criticism, that is, for the principle of the judgment of all use of the understanding in general, though but of its rightness with respect to the mere form; as it (logic) is as little an organon as universal grammar.

Universal logic, as the propedeytic of all use of the understanding in general, is distinguished, in another point of view, from transcendental logic, in which the object itself is represented as an object of the bare understanding, whereas universal logic extends to all objects in general.

If we collect all the essential marks which pertain to the full determination of the conception of logic, we must give the following conception of it:

Logic, as to the mere form, but not as to the matter, is a science of reason; a science *à priori* of the necessary laws of thinking, with regard, not to particular objects, but to all objects in general; by consequence a science of the right use of the understanding and of reason in general, not subjectively, that is, not on empirical (psychological) principles, how the understanding thinks, but objectively, that is, on principles *à priori*, how it must think.

II.

Principal divisions of Logic.—Propounding.—Use of this Science.—Sketch of a History of it.

Logic is divided,

1, into the analytic and the dialectic. The analytic, by dissecting, discovers all the operations of reason, which we perform in thinking in general. It is, therefore, an analytic of the form of the understanding and of reason, and justly named the logic of truth; because it contains the necessary rules of all (formal) truth, without which our cognition is, without regard to the objects, untrue in itself. It consequently is nothing more than a canon of dijudication (of the formal rightness of our cognition).

Should this merely theoretical and universal doctrine be used as a practical art, that is, as an organon, it would become a dialectic, a logic of appearance *(ars sophistica, disputatoria)*, which arises from a mere abuse of the analytic, when, according to the bare logical form, the appearance of a true cognition whose marks must however be taken from the agreement with the objects, consequently from the matter, is fabricated.

In former times the dialectic was studied with great diligence. By this art false principles were propounded under the appearance of truth, and it was endeavoured, conformably to them, to maintain things in appearance. Among the Greeks the dialecticians were the counsellors and the orators, who could lead the people as they pleased; because the people can be deceived by appearances. Dialectic, then, was at that time the art of appearance. In logic, it was for a time propounded under the name of the art of disputation, and so long was all logic and all philosophy the culture of certain praters, to fabricate every appearance. But nothing can be more unworthy of a philosopher, than the culture of an art of that sort. In this signification, therefore, it must be totally exploded, and, instead of it, a criticism of this false appearance introduced into logic.

We shall consequently have two parts of logic: the analytic, which propounds the formal criteria of truth; and the dialectic, which comprises the marks and the rules, by which we can know, that something does not agree with them. In this sense the dialectic would be of great use as a cathartic of the understanding.

Logic is usually divided still,

2, into natural or popular, and artificial or scientific *(logica scholastica).*

But this division is improper. For natural logic, or that of common sense, is not logic, but an anthropological science, which, as it handles the rules of the natural use of the understanding and of reason, that are known but in the concrete, of course without consciousness of them in the abstract, has only empirical principles. Nothing but artificial or scientific logic, then, as a science of the necessary and of the universal rules of thinking, which, independently of the natural use of the understanding and of reason, must, though they can be found at first by the observation of that natural use only, be known in the abstract *à priori*, deserves the name of logic.

3. Yet another division of logic is, that into theoretical and practical. But this division too is wrong.

Universal logic, which, as a mere canon, abstracts from all objects, cannot have a practical part. This, as practical logic gives to presuppose the knowledge of a certain sort of objects, to which it is applied, were a contradiction *in adjecto*. Hence may we denominate every science practical logic; for in every science we must have a form of thinking. Universal logic considered as practical, can therefore be nothing more than a technic of learning in general, an organon of the scholastic method.

In consequence of this division logic has a dogmatical and a technical part. The former may be termed the doctrine of elements, the latter that of method. The practical or technical part of logic is a logical art that treats of the arrangement and of the logical terms of art and distinctions, in order thereby to facilitate the operations of the understanding.

In neither of the parts, however, whether the technical, or the dogmatical, must the least attention be paid, either to the object, or to the subject of thinking. In the latter reference logic may be divided,

4, into pure and applied or mixed. In pure logic we separate the understanding from the other powers of the mind and consider what it does by itself. Applied logic considers the understanding as mixed with the other powers of the mind, which influence its operations and give it a false direction, so that it does not proceed according to the laws, which it knows to be the right ones.

In strict propriety, mixed or applied logic must not be termed logic. It is a psychology, in which we consider how our thinking usually goes on, not how it must go on. At last, indeed, it says what must be done, in order, under the various subjective impediments and limitations, to make a right use of the understanding; besides, we may learn from it what promotes the right use of the understanding, its helps or the correctors of logical faults and errors. But it is not propedeytic. For psychology, from which every thing in applied logic must be taken, is a part of the philosophical scienees, to which logic must be the propedeytic.

It is said, that the technic, or the method of constructing a science, must be propounded in the applied logic. But that is in vain, nay, even pernicious. In that case we begin to build before we have materials and give the form, but the matter is wanting. The technic must be propounded in every science.

Finally with respect to,

5, the division of logic into that of the common and that of the speculative understanding, we have to observe, that this science can by no means be thus divided.

It cannot be a science of the speculative understanding. For, as a logic of the speculative cognition or of the speculative use of reason, it were an organon of other sciences, and not a mere propedeytic, or pre-exercitation, which must extend to all possible use of the understanding and of reason.

Just as little can logic be a production of common sense. This sense is the faculty of knowing the rules of cognition in the concrete. But logic must be a science of the rules of thinking in the abstract.

The universal human understanding may however be assumed as the object of logic; and in it we then abstract from the particular rules of speculative reason, and it is consequently distinguished from the logic of the speculative understanding.

As to the propounding of logic, it may be, either scholastic, or popular.

It, when it is suitable to the desire for knowledge, to the capacities and to the culture of those, who have a mind to treat the knowledge of the logical rules as a science, is scholastic. But it, when it descends to the capacities and the wants of those, who have a mind, not to study logic as a science, but to use it in order to enlighten their understandings, is popular. In the scholastic propounding the rules must be exhibited in their universality, or in the abstract; in the popular, on the other hand, in the particular, or in the concrete. The scholastic propounding is the basis of the popular; for nobody can propound any thing in a popular way, but he who can do it more profoundly also.

To conclude, we here distinguish propounding from method. By method we understand the way in which a certain object, to whose cognition it is to be applied, is to be completely known. It must be taken from the nature of the science itself, and of course, as an order of thinking thereby determined and necessary, cannot be altered. Propounding signifies nothing but the way of communicating or delivering one's thoughts to others, in order to render a doctrine intelligible.

From what we have said of the nature and of the end of logic, the value of this science and the use of its study may be estimated according to a right and a determinate scale.

Logic is not a universal art of invention or of discovery; not an organon of truth; nor is it algebra, by whose assistance hidden truths may be discovered.

Yet it (logic) is useful and indispensable as a criticism on cognition; or for judging, as well of common, as of speculative reason, in order not to instruct it, but to render it correct, and to make it consistent, or agree with itself. For the logical principle of truth is, the agreement of the understanding with its own universal laws.

Finally, with regard to the history of logic, we shall only mention what follows:

The logic of the present day derives its origin from Aristotle's Analytic. That philosopher may be considered as the father of logic. He propounds it as an organon, and divides it into analytic and dialectic. His method is very scholastic and extends to the unfolding of the most general conceptions which form the basis of logic; of which unfolding, however, there is no use; because almost every thing in this case runs into mere subtilties, except that the denomination of various operations of the understanding is taken from it.

Besides, logic, since the times of the Stagyrite, has not gained much in point of matter; nor can it do so from its very nature. But it may gain with respect to accuracy, determinateness, and distinctness. There are but few sciences, which can attain a permanent state, so as not to be altered any more. To those both logic and metaphysic pertain. Aristotle has omitted nothing of consequence belonging to the understanding; we are but more accurate, methodical or orderly in the science of logic.

It was believed, that Lambert's Organon would augment logic much. But it contains nothing except more subtile divisions which, like all right subtilties, sharpen the intellect, but are of no material use.

Among the modern philosophers there are two, Leibnitz and Wolf, who have introduced universal logic.

Malebranche and Locke, as they handle the matter of cognition and the origin of conceptions, do not treat of any logic in the proper sense.

Wolf's universal logic is the best we have. Some have conjoined it with Aristotle's logic, for instance Reusch.

Baumgarten, a man, who has great merit in this respect, has concentrated Wolf's logic, and Mayer made comments on Baumgarten.

Crusius too is numbered among the modern logicians; but he did not reflect sufficiently on the nature of this science. For his logic contains metaphysical principles, and consequently passes the bounds of logic; besides, he establishes a criterion of truth, which can be none, and therefore gives in this respect free scope to all extravagancies.

In the present times there is not one celebrated logician, and we have no occasion for any new discoveries for logic; because it comprises the form of thinking only.

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III.

Conception of Philosophy in general. Philosophy considered according to both the scholastic and the mundane Conception. Essential Requisites and Ends of Philosophising. The most general and the chief Problems of this Science.

It is sometimes difficult to explain what is understood by a science. But the science gains in point of precision by the establishing of its determinate conception, and many faults, which slip in when the science cannot be distinguished from the sciences allied to it, are avoided.

Previously to our attempt to give a definition of philosophy, however, we must investigate the character of the various cognitions themselves, and, as the philosophical ones belong to the cognitions of reason, explain, in particular, what is to be understood by the latter.

The cognitions of reason are opposed to the historical cognitions. Those are cognitions from principles; these, cognitions from data. But a cognition may arise from reason and yet be historical; when, for example, a man of letters learns the productions of the reason of others, his cognition of them is merely historical.

Cognitions may be distinguished,

1, according to their objective origin, that is, the only source, from which a cognition is possible. In this respect all cognitions are, either rational, or empirical;

2, according to their subjective origin, that is, the way, in which a cognition can be acquired by men. Considered under the latter point of view, the cognitions are, either rational, or historical, in whatever way they in themselves may have taken their origin. A cognition therefore may be a cognition of reason objectively, when it is but historical subjectively.

It is pernicious to know some rational cognitions merely historically, but indifferent to know others so. The mariner, for instance, knows the rules of navigation historically from his tables; and that is enough for him. But, when the lawyer knows law historically only, he is rendered very unfit indeed for a good judge, and utterly so for a legislator.

From the adduced distinction between the objectively and the subjectively rational cognitions, it is obvious, that one may learn philosophy in a certain respect without being able to philosophise. By consequence he, who would become a philosopher, must exercise himself in making a free and not merely an imitative and, so to say, a mechanical use of his reason.

We have explained the cognitions of reason as cognitions from principles; and hence it follows, that they must be *à priori*. But there are two species of cognitions, the mathematics and philosophy, which are both *à priori*, and yet very considerably distinct.

It is usually maintained, that the mathematics and philosophy, as the former treats of quantity, the latter of quality, are distinct from one another as to the object. That is however false. The distinction of these sciences cannot depend upon the object; for philosophy extends to every thing, consequently to quanta too, and the mathematics do so likewise, as far as every thing has a quantum. Nothing but the distinct sort of the cognition of reason or of the use of reason in the mathematics and in philosophy makes the specific distinction between these sciences. Philosophy is, The cognition of reason from mere conceptions; the mathematics, on the other hand, are, The cognition of reason from the construction of conceptions.

We construct conceptions when we exhibit them by intuition *à priori*, without experience, or when we exhibit by intuition the object, which corresponds to our conception of it. The mathematician never can use his reason according to mere conceptions; the philosopher never his by the construction of conceptions. In the mathematics reason is used in the concrete; the intuition however is not empirical, but we in this case make for ourselves something *à priori* the object of intuition.

We perceive, that the mathematics have this advantage of philosophy, that their cognitions are intuitive; while those of it are but discursive. And the reason of our reflecting more on quantities in the mathematics is, that quantities may be constructed by intuition *à priori*; whereas qualities cannot be exhibited by intuition.

Philosophy is the system of philosophical cognitions, or of the cognitions of reason from conceptions. That is the scholastic conception of this science. According to the mundane conception, Philosophy is the science of the ultimate ends of human reason. This sublime conception, gives a dignity, that is, an absolute value, to philosophy. And it is really it only that is of intrinsic value, and gives a value to all other cognitions.

It is usually inquired, What is the use of philosophising and its scope—philosophy even considered as a science according to the school conception?

In this scholastic sense of the word philosophy extends to address only; but it, relatively to the mundane conception, extends to utility. In the former respect philosophy is therefore a doctrine of address; in the latter, a doctrine of wisdom; the legislatrix of reason, and the philosopher, in this view, not the artificer, but the legislator of reason.

The artificer of reason or, as Socrates names him, the philodox, endeavours merely after speculative knowledge, without regarding how much the knowledge contributes to the final end of human reason; he gives rules for the use of reason for all sorts of ends. The practical philosopher or the sage, the teacher of wisdom both by doctrine and by example, is the philosopher in the proper sense. For philosophy is the idea of a perfect wisdom that shews us the final ends of human reason.

To philosophy in the scholastic sense two things are requisite:

The one, a sufficient stock of the cognitions of reason; the other, a systematic coherence of these cognitions, or their conjunction in the idea of a whole.

Philosophy, not only allows a strictly systematic coherence, but is even the only science, which in the proper sense has a coherence of that sort, and gives all other sciences systematic unity.

But, with regard to philosophy according to the mundane sense *(in sensu cosmico)*, it may be termed, A science of the highest maxim of the use of our reason, provided that we understand by a maxim, the internal principle of choice between various ends.

For philosophy, in this signification, is the science of the reference of all cognition and of all use of reason to the scope of human reason, to which, as the highest, all other ends are subordinated, and in which they must conjoin to a unity.

The field of philosophy, in this cosmopolitical sense, may be reduced to the following questions:

1. What can we know?
2. What ought we to do?
3. What may we hope for?
4. What is man?

The first question is answered by metaphysic, the second by philosophy, the third by religion, and the fourth by anthropology. But they at bottom might all be considered as pertaining to anthropology; because the three first questions refer to the last one.

The philosopher must therefore be able to determine,

1, the sources of human knowledge,

2, the sphere of the possible and the advantageous use of all knowledge, and finally,

3, the boundaries of reason.

The last is the most necessary, as well as the most difficult, but about which the philodox gives himself no trouble.

To a philospher two things are chiefly requisite: 1, culture of his talents, and of address, in order to use them for all sorts of ends;

2, habit in the use of all means to whatever ends he pleases. Both must be united; for without knowledge one will never become a philosopher; but knowledge alone, unless a proper conjunction of all cognitions and abilities in a unity and an insight into their agreement with the highest ends of human reason be superadded, will never constitute the philosopher.

In general whoever cannot philosophise, cannot name himself a philosopher. But philosophising cannot be learned but by exercise, and by the use of one's own reason.

And how should philosophy be susceptible of being learned? –Every philosophical thinker builds, so to say, his own work upon the ruins of another; but a work, stable in all its parts, has never yet been executed. Philosophy, therefore, as it is not yet given, cannot be learned. But suppose there were one extant, nobody, who should learn it, could even then say, that he is a philosopher; for his knowledge of it never could be but subjectively historical.

In the mathematics it is otherwise. This science may in some degree be learned; for the proofs in it are so evident, that every body may be convinced of them; and it may, on account of its evidence, be, as it were, laid up as a certain and a stable doctrine.

Whoever would learn to philosophise must, on the contrary, consider all the systems of philosophy as histories of the use of reason only, and as objects of the exercise of his philosophic talent.

The true philosopher, therefore, must, as a thinker for himself, make a free use of his reason, not an imitative use in a servile manner. But not a dialectic use, that is, such a one as tends to give cognitions an appearance only of truth and of wisdom. This is the business of the mere sophister; but absolutely incompatible with the dignity of the philosopher, as a knower and teacher of wisdom.

For science is of an intrinsic value as an organon of wisdom only. But, as such, it is indispensable to it; so that it may well be maintained, that wisdom without science is a shadow of a perfection which we never shall reach.

Who hates science, but does not love wisdom the less on that account, is named a misologist. Misology commonly arises from a want of scientific knowledge, and from a certain sort of vanity therewith conjoined. And sometimes those, who at first cultivated the sciences with great diligence and success, but in the end found no satisfaction in all their knowledge, fall into the fault of misology.

Philosophy is the only science, which can yield us this internal satisfaction; for it closes, so to say, the scientific circle, and the sciences then obtain first, by it, order and cohesion.

We therefore shall have, for the behoof of the exercise in thinking for one's self, or of philosophising, to consider, more the method of our use of reason, than the propositions themselves, at which we arrive by it.

IV.

Light Sketch of a History of Philosophy.

It occasions some difficulty to determine the bounds, where the common use of the understanding ends and the speculative of it begins; or, when common cognition of reason becomes philosophy.

Yet there is in this case a pretty sure criterion:

The knowledge of the universal in the abstract is speculative, that of the universal in the concrete common, cognition.—Philosophical cognition is speculative cognition of reason, and consequently it commences when the common use of reason begins to make essays in the knowledge of the universal in the abstract.

From this determination of the distinction between the common and the speculative use of reason, it may be judged what nation made the beginning in philosophising. Of all nations the Greeks began the first to philosophize. For they began the first to cultivate the cognitions of reason, not by the clew of images, but in the abstract; instead of which other nations never endeavoured to render conceptions intelligible to themselves but by images in the concrete. And there are nations, for instance, the Chinese and a few Indians, who treat of things taken merely from reason, such as God, the immortality of the soul, and many the like; but do not endeavour to investigate the nature of these objects according to conceptions and to rules in the abstract. In this case they make no distinction between the use of reason in the concrete and that in the abstract. Among the Persians and the Arabians some speculative use of reason is to be found; but they have taken its rules from Aristotle, of course from the Greeks. In Zoroaster's Zend-Avesta not the smallest trace of philosophy is to be discovered. That holds good of the esteemed Egyptian wisdom which, in comparison of the Greek philosophy, is a mere trifle.

With regard to the mathematics too the Greeks are the first that cultivated this part of the cognition of reason after a speculative scientific method; as they have demonstrated every theorem from elements.

But when and where the philosophic spirit first arose among the Greeks, cannot be properly determined.

The first that introduced the use of speculative reason, and from whom the first steps of the human understanding to scientific culture are derived, is Thales, the author of the Ionic sect. He, though he was a mathematician too, is, as the mathematics in general have always preceded philosophy, distinguished by the name of physicus.

Besides, the first philosophers dressed every thing in images. For poetry, which is nothing but a dress of thoughts in images, is more ancient, than prose. Hence were men obliged at first to use, even with regard to things that are merely objects of pure reason, the language of imagery and the poetic style. Pheretzydes is said to be the first author that wrote in prose.

The Eleatics followed the Ionians. The principle of the Eleatic philosophy and of its founder, Xenophanes, is, 'In the senses there is illusion; the source of truth lies in the understanding only.'

Among the philosophers of this school Zeno of Elea distinguishes himself, both as a man of great understanding and acumen, and as a subtile dialectician.

Dialectic in the beginning signified the art of the pure use of the understanding with regard to abstract conceptions separated from all sensitivity. Hence the many commendations of this art among the ancients. Afterwards, when those philosophers, who totally rejected the testimony of the senses, necessarily attended to many subtilties, dialectic degenerated into the art of maintaining and of impugning every proposition. And thus did it become a mere exercise for the sophisters, who had a mind to reason on every thing, and studied to give appearance the colour of truth, to make black white. For which reason the name of sophist, by which a man that could speak reasonably and with a proper knowledge of every subject was understood, is become hated and contemptible, and instead of it the name of philosopher is introduced.*

At the time of the Ionic school there arose in Great Greece a man of rare parts, who, not only erected a school, but formed and accomplished a project that never had its like. It is Pythagoras, who was born in Samos. He founded a society of philosophers, who were united in an alliance with one another by the law of secrecy. He divided his auditors into two classes; those of acusmatists (ακουσμαϑικοι), who were allowed to hear only, and those of acromatists (ακροαμαϑικοι), who were permitted to ask questions too.

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* In English we distinguish between a Sophist and a Sophister; the former was a teacher of wisdom in Athens, the latter is a specious or plausible but a false reasoner. T.

A few of his doctrines were exoteric, which he propounded to every body; the others were secret and esoteric, destined to the members of his alliance only, for some of whom he conceived an intimate friendship, and separated them entirely from the rest. He made the physics and theology the vehicle of his secret doctrines, by consequence the doctrine of the visible and of the invisible. Besides, he had various symbols, which in all probability were nothing but certain signs serving the Pythagoreans to communicate their thoughts to one another.

The end of his alliance seems to have been no other, than to purify religion from popular errors, to moderate tyranny, and to introduce more loyalty into states. But this alliance, which the tyrants began to be afraid of, had been destroyed a little before Pythagoras' death, and this philosophical society dissolved, partly by the execution, partly by the flight and the exile of the greater number of the allied. The few that remained were novices. And, as they did not know much of Pythagoras' particular doctrines, we can say nothing certain and determinate of them. Many doctrines have since been ascribed to Pythagoras, who was besides an excellent mathematician, but which are certainly counterfeited.

The most important epoch of the Greek philosophy commences with Socrates. For it is he, who gave the philosophic spirit and all the speculative heads quite a new practical direction. And he is almost the only one among mankind, whose conduct approaches nearly to the idea of that of a sage.

Of his disciples Plato, who occupied himself more in the practical doctrines of Socrates, is the most eximious; and of the disciples of Plato, Aristotle (founder of the peripatetic sect), who on the other hand improved speculative philosophy.

The Epicureans and the Stoics, who were the sworn enemies of one another, followed Plato and Aristotle. Those place the chief good in a cheerful heart, which they term voluptuousness; these found it in the greatness and the strength of the soul, by which all the *agrémens*, or sweets of life, may be dispensed with.

In speculative philosophy the Stoics are dialectical; in moral, dogmatical, and shew in their practical principles, by which they have sown the seeds of the most sublime sentiments that ever were harboured, uncommonly great dignity. The founder of the Stoic school is Zeno of Cittium. The most celebrated men of this school among the Greek philosophers are Cleanthes and Chrysippus.

The Epicurean school never could acquire the reputation the Stoics had. But whatever may be said of the Epicureans, it is certain, that they observed the greatest moderation in enjoyment, and were the best natural philosophers of all the thinkers of Greece.

We have still to remark, that the chief Greek schools bear particular names. The school of Plato is denominated, Academy, from the grove of Academus, in which he taught; that of Aristotle, Lyceum;* that of the Stoics, Porticus (στοη), a covered passage, from which the word, stoic, is derived; the school of Epicurus, Horti; because he taught in gardens. Plato's academy was followed by three other academies, which were founded by his disciples. Speusippus founded the first, Arcesilaus the second, and Carneades the third.

These academies inclined to scepticism. Both Speusippus and Arcesilaus were of the sceptical cast of mind, and Carneades was yet more so. On this account the sceptics, these acute, dialectic philosophers, were also named academics. The academics then followed the first great sceptic, Pyrrho, and his successors. Their teacher, Plato himself, gave occasion to that by propounding many of his doctrines dialogically, so that reasons *pro* and *contra* were adduced without his deciding on them, though he was at other times very dogmatical.

If we begin the epoch of scepticism from Pyrrho, we have a whole school of sceptics, who are materially distinguished in their way of thinking and their method from the dogmatists, by their making it the first maxim of all philosophical use of reason, To suspend one's judgment notwithstanding the greatest appearance of truth; and laying down the principle, That philosophy consists in the equilibrium of judging, and teaches us to discover illusion. But nothing more of these sceptics remains, than the two works of Sextus Empiricus, wherein he has collected all their doubts.

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* The Lyceum (λυκειον), says Lucianus de Gymnasiis, is named from Apollo Luceus, to whom it was sacred. T.

When philosophy afterward passed from the Greeks to the Romans, it was not enlarged; for the Romans never were but scholars.

In speculative philosophy Cicero is a disciple of Plato, in moral a stoic. Epictetus, Antoninus the philosopher, and Seneca belonged as the most eminent to the stoic sect. There were no teachers of natural philosophy among the Romans except Pliny the elder, who has left us a natural history.

Culture disappeared at last among the Romans too, and barbarity succeeded, till the Arabians began, in the sixth and the seventh centuries, to apply to the sciences and to revive Aristotle. The sciences and the consideration of the Stagyrite in particular, then recovered themselves in the West, but he was followed in a servile manner. In the eleventh and the twelfth centuries the scholastics appeared; they explain Aristotle and carry his subtilties to infinite. They occupied themselves about nothing but mere abstractions. This scholastic method of false philosophising was supplanted at the time of the reformation; and then there were eclectics in philosophy; that is, thinkers for themselves, who acknowledge no school, but seek truth, and adopt it where they find it.

But philosophy owes its amendment in more modern times, partly to the greater study of nature, partly to the conjunction of the mathematics with the physics. The order, which has been occasioned in thinking by the study of these sciences has diffused itself over the particular branches of philosophy in the proper sense. Bacon is the first and the greatest natural philosopher of more modern times. In his researches he treads the path of experience, and calls the attention to the importance and the indispensableness of observations and of experiments to the discovery of truth It is however difficult to say whence the amendment of speculative philosophy comes. Descartes acquired not little merit with regard to it by contributing much to give thinking distinctness by his erected criterion of truth, which he puts in the clearness and the evidence of knowledge.

Leibnitz, however, and Locke, are to be numbered among the greatest and the most meritorious reformers of philosophy in our times. The latter endeavours to dissect the human understanding, and to shew what powers of the mind and what operations of it belong to this or to that cognition. But he has not finished the work of his investigation; and his procedure is dogmatical, though his works have been productive of this advantage, that philosophers begin to study the nature of the mind better and more profoundly.

As to the particular dogmatic method of philosophising peculiar to Leibnitz and to Wolf, it is very faulty. And there is so much illusion in it, that it is absolutely necessary to suspend the whole procedure, and, instead of it, to introduce another—the method of the critical philosophising, which consists in this, 'To inquire into the procedure of reason itself, to dissect the whole human cognitive faculty, and to try how far its boundaries may extend.'*

In our age the physics are in the most flourishing state, and there are great names indeed among the natural philosophers, for instance, Newton. Later philosophers cannot properly be mentioned at present as distinguished and permanent names; because every thing in this science is, so to say, in a continual flux. What the one builds up, the other pulls down.

In moral philosophy we have not made greater progress than the ancients. But, as to the metaphysics, it seems as if we were at a loss with regard to the investigation of metaphysical truths. At present a sort of indifference for this science prevails; since many seem to pride themselves in speaking contemptuously of metaphysical inquiries, as mere useless brains-beating speculations. And yet metaphysic is true philosophy.

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* It may not be improper here to mention, that Kant himself is the founder of the critical philosophy, a system, which begins with a most accurate and a profound philosophy of mind, but which, though it has obtained long and justly supplanted all former systems in Germany, is (to the great discredit of our dogmatising sophists be it told) not yet known in our island! T.

Our age is that of criticism, and we must see what will become of the critical essays of our time with respect to philosophy and to metaphysic in particular.*

V.

Cognition in general. Intuitive and discursive Cognition; Intuition and Conception, and their Distinction in particular. Logical and Esthetical Perfection of Cognition.

ALL our cognition has a two-fold reference; first, a reference to the object, secondly, that to the subject. It, in the former respect, refers to representation; in the latter, to consciousness, the universal condition of all cognition or knowledge in the general (and which, properly speaking, is a representation that another representation is in us, T.).

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* Those who do not read German will find Kant's critical works translated into Latin by professor Borne of Leipsic. But, as they are very difficult of translation, it were better to study them in German. They only give this age a just title to be named the age of criticism. T.

In every cognition matter, that is, the object, and form, that is, the way, in which we know the object, must be distinguished. If a savage for example, sees at a distance a house, whose use he does not know, he has, in the representation before him, the very same object, as another, who knows it determinately to be fitted for the habitation of men. But, as to the form, this knowledge of the same object is distinct in both. It with the one is mere intuition, but with the other at once intuition and conception.

The distinction of the form of cognition depends upon a condition, which accompanies all knowing—consciousness. If I am conscious to myself of the representation, it is clear; if I am not it is obscure.

As consciousness is the essential condition of all logical form of cognitions, logic can occupy itself, and must do so, with clear representations only, not with obscure ones. We consider in logic, not how representations arise, but how they agree with the logical form. And in general logic cannot handle mere representations and their possibility. That it leaves to the metaphysics to do. It occupies itself about the rules of thinking merely, about conceptions, judgments, and syllogisms, as the means by which all thinking is performed. It is true, something precedes before a representation becomes a conception. And that we will shew in its proper place. But we shall not inquire How representations arise. Logic indeed treats of knowing; because in it thinking has place. Representation however is not cognition, but cognition always gives to presuppose representation. And this can absolutely not be explained.* For it would always be necessary to explain what representation is by another representation.

All clear representations, to which only the logical rules can be applied, may be distinguished with regard to distinctness and to indistinctness. If we are conscious to ourselves of the whole representation, but not of the multifarious that is contained in it, the representation is indistinct. For the dilucidation of the thing, take first an example by intuition:

We discover a country house at a distance. If we are conscious to ourselves, that the object perceived by intuition is a house, we must necessarily have a representation of its different parts—the windows, the doors, &c. For, if we did not see the parts, we could not see the house itself. But we are not conscious to ourselves of this representation of its various parts, and hence is our representation of the object itself an indistinct one.

If we wish to have an instance of indistinctness in conceptions, the conception of beauty may serve for the purpose. Every one has a clear conception of beauty. But various marks occur in this conception; among others, that the beautiful must be something that is an object of the senses, and that pleases universally. If we cannot disentangle these and the various other marks of the beautiful our conception of it is never but indistinct.

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* Except by saying, that it is Internal determination of the mind, in any relation of time, in general. T.

An indistinct representation the disciples of Wolf term a confused one. But this epithet is not proper; because the opposite of confusion is, not distinctness, but order. Distinctness is an effect of order, and indistinctness that of confusion; and every confused cognition is of course an indistinct one. But the proposition does not hold conversely;—not every indistinct cognition is a confused one. For in cognitions, in which there is no multifarious to be met with, there is, neither order, nor confusion.

That is the case with all simple representations, which never become distinct; not because confusion, but because no multifarious, is to be met with in them. They must therefore be termed, not confused, but indistinct.

And even in the composed representations, in which a variety of marks may be distinguished, the indistinctness often proceeds from weakness of consciousness, not confusion. There may be distinctness as to the form, that is to say, I may be conscious to myself as to the multifarious in the representation; but as to the matter the distinctness may decrease when the degree of consciousness becomes smaller, though perfect order exists. And that is the case with abstract representations.

Distinctness itself may be two-fold:

First, a sensual one. This consists in the consciousness of the multifarious by intuition. We see, for instance, the galaxy as a whitish streak; the rays of light from the single stars in it must necessarily have entered into the eye. But its representation was but clear, and becomes first by the telescope distinct; because we now discover the single stars contained in the galaxy;

Secondly, an intellectual one: Distinctness in conceptions, or distinctness of the understanding. This depends upon the dissection of the conception with respect to the multifarious that is comprised in it (the conception). There are, for example, contained in the conception of virtue as marks, 1, the conception of liberty, 2, that of the adherence to rules (of duty), and 3, that of the overcoming of the power of the inclinations, when they are repugnant to those rules. When we thus resolve the conception of virtue into its single constituents, we render it distinct to ourselves just by this analysis. But by this act of rendering distinct we add nothing to a conception; we but explain it. Hence are conceptions amended in distinctness, not as to the matter, but as to the form.

If we reflect on our cognitions with regard to the two essentially distinct fundamental capacities or faculties, those of sensitivity and of understanding, whence they arise, we shall hit the distinction between intuitions and conceptions. All our cognitions, considered in this view, are either intuitions, or conceptions. The former have their source in the sensitivity, the power of intuitions; the latter, in the understanding, the faculty of conceptions. This is the logical distinction between the understanding and the sensitivity, according to which distinction this yields nothing but intuitions, that, on the contrary, nothing but conceptions. Both fundamental faculties may however be considered in another point of view and defined in another way; the sensitivity as a passivity or receptibility, the understanding as a spontaneity, or self-active power. But this mode of explication is metaphysical, not logical. And the sensitivity is usually named the inferior faculty, the understanding, on the other hand, the superior; because the sensitivity gives the mere materials for thinking, but the understanding disposes of them and reduces them to rules or conceptions.

In the distinction between intuitive and discursive cognitions, or between intuitions and conceptions, here adduced, the variety of the esthetical and of the logical perfection of cognition is founded.

A cognition may be perfect according, either to laws of the sensitive faculty, or to those of the cogitative; in the former case it is esthetically perfect, in the latter logically so. The esthetical perfection and the logical therefore are of a discrepant sort; the former has relation to the sensitivity, the latter to the intellect. The logical perfection of cognition depends upon its agreement with the object; by consequence upon universally valid laws, and can of course be judged according to rules *à priori.* The esthetical perfection consists in the agreement of the cognition with the subject, and bottoms upon the sensitive capacity peculiar to every single person. In the esthetical perfection, then, no objectively and universally valid laws, relatively to which it would be judged of *à priori* in a universally valid manner for all thinking beings in general have place. If, however, there are universal laws of sensitivity, which hold good, not objectively, for all thinking beings in general, yet subjectively, for all humankind, an esthetical perfection, which comprises the ground of a subjectively universal, or a general, complacency, may be conceived. This is beauty—what pleases the senses intuitively and can be the object of a universal complacence; because the laws of intuition are universal laws of sensitivity.

By this agreement with the universal laws of the sensitive receptibility the proper self-sufficient Beautiful, whose essence consists in the mere form, is specifically distinguished from the Agreeable, which pleases merely in the sensation by charms or moving, and can on that account be nothing but the ground of a mere private complacency.

And it is this essential esthetical perfection, which comports with the logical perfection, and admits of being conjoined with it the best of any.

Considered under this point of view the esthetical perfection may be advantageous, with regard to that essential beautiful, to the logical perfection. But it, in another respect, is disadvantageous to it, if we consider in the esthetical perfection nothing but the unessential beautiful—the charming or the moving, which pleases in the mere sensation and refers, not to the bare form, but to the matter of the sensitivity. For charms and moving can spoil the logical perfection in our cognitions and judgments the most.

In general there always remains between the esthetical and the logical perfection of our cognition a sort of contest, which cannot be fully put an end to. The understanding wants to be informed, the sensitivity to be animated; the former desires insight, the latter capability. Cognitions, if they are to instruct, must be solid or profound; if they are to entertain, they must be beautiful. If a propounding is beautiful, but shallow, it may please the sensitivity, but cannot the understanding; if it conversely is profound, but dry, it can please the understanding only, not the sensitivity.

As the want of human nature, however, and the end of the popularity of cognition require, that we should endeavour to unite both perfections, we must study to furnish those cognitions with an esthetical perfection, which are in general capable of it, and to render a scholastic logically perfect cognition popular by the esthetical form. But in this endeavour to join the esthetical and the logical perfection in our cognitions we must not neglect the following rules: 1, that the logical perfection is the basis of all other perfections, and therefore must not be quite postponed or sacrificed to any other; 2, that the formal esthetical perfection—the agreement of cognition with the laws of intuition—be carefully considered; because just in it the essential beautiful, which can be the least united with the logical perfection, consists; 3, that we must be very cautious with charms and moving, by which a cognition acts upon sensation and obtains an interest for it; because hereby the attention is so easily drawn from the object to the subject; from which then a very disadvantageous influence on the logical perfection of cognition must obviously arise.

In order to make the distinctions, which have place between the logical and the esthetical perfections of cognition, still more knowable, not only in the general, but in various particular points of view, we shall compare them together with regard to the four chief points of quantity, of quality, of relation, and of modality, upon which the stress lies in the judgment on the perfection of cognition.

A cognition is perfect, 1, as to quantity, when it (a cognition) is universal; 2, as to quality, when it is distinct; 3, as to relation, when it is true; and 4 and lastly, as to modality, when it is certain.

Considered in those points of view, a cognition is logically perfect, as to quantity, when it (a cognition) has objective universality (universality of the conception or of the rule); as to quality, when it has objective distinctness (distinctness in the conception); as to relation, when it has objective truth; and finally as to modality, when it has objective certainty.

To those logical perfections the following esthetical perfections correspond relatively to those four main points:

1, the esthetical universality. This consists in the applicableness of a cognition to a multitude of objects, which serve for examples, to which its application can be made, and by which it may also be used for the purpose of popularity;

2, the esthetical distinctness. This is the distinctness by intuition, whereby an abstractly formed conception is exhibited in the concrete by examples, or illustrated;

3, the esthetical truth. A merely subjective truth, which consists but in the agreement of the cognition with the subject and with the laws of the appearance of sense, and by consequence is nothing more than a universal appearance;

4, the esthetical certainty. This depends upon what is necessary in consequence of the testimony of the senses, that is, what is confirmed by both sensation and experience.

In the perfections just mentioned two parts, multifariousness and unity, whose harmonious conjunction constitutes perfection in general, always occur. With the understanding the unity lies in the conception; with the senses in the intuition.

Mere multifariousness without unity cannot satisfy us. And hence is truth the chief of all perfections; because it is, by the reference of our cognition to the object, the ground of unity. And even in the esthetical perfection truth always remains the *conditio sine qua non*, the chief negative condition, without which nothing can please taste universally. Hence needs nobody hope to make progress in the belles lettres, if he has not founded his cognition in logical perfection. And, as well the character, as the art of a genius, betrays itself in the greatest possible union of the logical with the esthetical perfection in general with respect to such knowledge, as is intended at once to edify and to entertain.

VI.

Particular logical Perfections of Cognition.

A. *Logical Perfection of Cognition as to Quantity. Greatness. Extensive and intensive Greatness. Copiousness and Profoundness or Importance and Fertility of Cognition. Determination of the Horizon of our Cognition.*

THE greatness (or quantum) of cognition may be taken in a two-fold sense, as, either extensive, or intensive. The former refers to the sphere of cognition and consequently consists in its abundance and variety (or multifariousness); the latter, to its contents, which regard the great value (*Vielgültigkeit*) or the logical importance and fertility of a cognition, provided that it is considered as the ground of many and of great consequences (*non multa sed multum*).

In the enlarging of our cognitions or in advancing them to perfection, as to their extensive quantum, it is good to calculate how far a cognition agrees with our ends and our capacities. This reflection concerns the determination of the horizon of our cognitions, by which horizon is to be understood, The adequateness of the quantum of all the cognitions to the capacities and the ends of the subject.

The horizon may be determined,

1. logically, according to the faculty or the powers of cognition with respect to the interest of the understanding. We have here to judge how far we can go in our cognitions, how far we shall go in them, and how far certain cognitions serve with a logical view for means to these or to those principal cognitions, as our ends;

2. esthetically, according to taste with regard to the interest of feeling. Who determines his horizon esthetically, endeavours to accommodate the science to the taste of the public, that is to say, to render it popular, or in general to acquire such cognitions only, as may be universally communicated;

and as please the class of the illiterate and in which they are interested;

and 3, practically, according to the utility with regard to the interest of the will. The practical horizon, if it is determined according to the influence, which a cognition has on our morality, is pragmatical and of the greatest moment.*

The horizon then concerns the judgment and the determination of what man can know, of what he may know, and of what he ought to know.

As to the theoretically or logically determined horizon in particular—and it only can be the matter in hand in this place—we may consider it in either the objective, or the subjective, point of view.

With regard to the objects the horizon is, either historical or rational. The former is much wider than the latter, nay, it is immensely great; for our historical knowledge has no bounds. Whereas the rational horizon may be fixed; it for example may be determined to that sort of objects, to which the mathematical cognition cannot be extended. And with respect to the philosophical cognition of reason, how far reason can go in its *à priori*, without any experience.

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[*] Knowledge, provided that it serves for accomplishing our design, is (according to Kant) Pragmatical—belongs to welfare. T.

Relatively to the subject the horizon is, either the universal and absolute, or a particular and conditional (a private) one.

By the absolute and universal horizon is to be understood the congruence of the boundaries of the human cognitions to those of all human perfection in general. And therefore the question, What can man, as man in general, know? now occurs.

The determination of the private horizon depends upon various empirical conditions and special considerations, for instance, of age, of sex, of rank, of the business or the profession, and many the like. Every particular class of men has, with regard to its special powers of knowledge, ends and stations peculiar to it; every head in proportion to the individuality of its powers and of its station, its own horizon. Finally, we may conceive of a horizon of sane reason and of one of science, which latter requires principles, in order to determine according to them what we can know (scientifically) and what we cannot.

What we cannot know is above our horizon; what we need not know or have no occasion to know, without our horizon. The latter however can hold but relatively, with regard to this or to that particular private end, to the attaining of which certain cognitions might, not only contribute nothing, but even be an impediment. For no cognition, though we may not always be able to see its utility, is absolutely useless in every respect. It is therefore both an unwise and an unjust reproach, with which great men, who cultivate the sciences with laborious industry, are charged by shallow pates, when they ask, What is the use of doing so? This question must by no means be put by those who have a mind to occupy themselves about the sciences. A science, suppose it could throw a light on any one possible matter, were then useful enough. Every logically perfect cognition is always of some possible use, which, though hitherto unknown to us, will perhaps be found out by posterity. Had nothing been ever considered in the culture of the sciences, but their material gain, their utility, we should have neither arithmetic nor geometry. Besides, our understanding is so ordered, that it finds satisfaction in the mere insight, and yet more than in the advantage that arises from it. This observation was made so early as by Plato. A man feels his own excellence on the occasion; he sees the meaning of having understanding. Men, who do not see that, must envy the brutes. The internal value, which cognitions are of by logical perfection, is not to be compared with their external value—that in the application.

As that, which lies without our horizon, if we need not know it according to our views, as not being necessary to us, is to be understood in a relative sense only, by no means in the absolute one, that, which lies below our horizon, if we should not know it, as being pernicious to us, is to be so likewise.

With a view to the enlarging and to the determining of the boundaries (the *demarcation*) of our cognition, the following rules are to be recommended:

one must,

1, determine his horizon early, yet not sooner, than he can do it himself; which commonly does not happen before the twentieth year;

2, not alter it easily and often (not go from one thing to another);

3, not measure the horizon of others by his own, nor hold useless that which is of no use to him: it would be audacious to pretend to determine the horizon of others; because one does not sufficiently know, either their capacities, or their views;

4, neither extend it, nor limit it, too much. For he, who would know too much, knows nothing at last, and who on the contrary thinks some things do not concern him often deceives himself; as when, for instance, the philosopher thinks he can do without history;

and we should endeavour,

5, previously to determine the absolute horizon of the whole human race (as to the past and the future time), and in particular,

6, to determine the place, which our science occupies in the horizon of all knowledge. The universal encyclopedy, as a universal map of the sciences, serves for that purpose;

7, in the determination of a particular horizon to try carefully for what branch of knowledge he has the greatest capacity and in what he takes the greatest delight; what is more or less necessary with regard to certain duties; what cannot consist with the necessary duties; and finally,

8, always to enlarge more than to contract our horizon.

In general we need not be apprehensive from the enlarging of the sciences of what d'Alembert is. For the load does not oppress us, but we are at a loss for room for our knowledge. Criticism on reason, on history and on historical works, a universal spirit, which extends to human knowledge in gross, and not merely in detail, will always diminish the sphere without lessening the matter. Nothing but the dross falls from the metal or the baser vehicle; the veil, which was necessary for a certain time, drops. With the enlarging of natural history, of the mathematics, &c. new methods which shorten the old matter and render the great number of books unnecessary, will be found out. Upon the discovery of such new methods and principles it will depend that we, without clogging the memory, can find every thing at pleasure with their assistance. Hence will he, who, like a genius shall comprise history under ideas, which can always remain, deserve well of it.

To the logical perfection of knowledge, with regard to its sphere, ignorance, a negative imperfection, or an imperfection of want, which, on account of the limits of our understanding, remains inseparable from our knowledge, is opposed.

We may consider ignorance both under a subjective and under an objective point of view.

1, Objectively taken, ignorance is, either a material, or a formal one. The former consists in a want of historical, the latter, in that of rational, cognitions. One must not be quite ignorant in any branch, but he may by all means limit the historical knowledge in order to apply the more to the rational, or conversely.

2, In a subjective sense, ignorance is, either a learned, a scientific, or a common one. Who distinctly sees the limits of knowledge, consequently the field of ignorance, where it begins—the philosopher, for example, who sees and proves how little we can know with respect to the structure of gold for want of the thereto requisite data, is ignorant scientifically, or in a learned manner. He, on the other hand, who is ignorant without perspecting the grounds of the bounds of ignorance and giving himself any trouble on that account, is so in a vulgar, not a scientific, manner. Such a man does not so much as know, that he knows nothing. For one never can represent to himself his ignorance otherwise, than by science, like a blind man, who cannot represent darkness to himself till he gets eyesight.

The knowledge of one's ignorance therefore gives us to presuppose science, and makes one modest, whereas imaginary knowledge puffs up. Socrates' ignorance was a commendable one; properly speaking, a knowledge of his want of knowledge, according to his own avowal. Consequently those, who possess a great deal of knowledge, and are for all that astonished at the quantum of what they do not know, cannot be reproached with ignorance.

In general the ignorance in things, whose knowledge goes above our horizon, is inculpable; and it may be allowed (though but in the relative sense) with regard to the speculative use of our cognitive faculty, provided that the objects lie, not above our horizon, but without it. But ignorance is disgraceful in things, to know which it is very necessary and even easy for us.

There is however a distinction between being ignorant of any thing and taking no notice of it. It is good to take no notice of a great deal of that which is not good for us to know. Abstracting is still distinguished from both. We abstract from a cognition when we take no notice of its application, by which means we obtain it in the abstract and can then consider it the better in the universal as a principle. Such an abstracting from what does not belong to our purpose in the knowledge of a thing is useful and praiseworthy.

Logicians commonly are historically ignorant.

Historical knowledge without determinate bounds is polyhistory; this puffs up. Polymathy is occupied in the cognition of reason. Both historical knowledge and knowledge of reason, extended without determinate bounds, may be denominated pansophy. To historical knowledge the science of the instruments of learning, philology, which comprehends a critical knowledge of books and of languages (literature and linguistic), belongs.

Mere polyhistory is, so to say, learning, which is cyclopic, or wants an eye——that of philosophy; and a cyclops of a mathematician, a historian, a natural historian, a philologer or a linguist, is a scholar, who is great in all these branches, but holds, that all philosophy on them may be dispensed with.

The humaniora, by which the knowledge of the ancients that favours the union of science with taste, polishes rudeness, and promotes communicability and urbanity, wherein humanity consists, is understood.

The humaniora then regard an instruction in what serves for the culture of taste conformably to the patterns of the ancients. To them, eloquence, poetry, the knowledge acquired by reading the classical authors, and many similar acquirements pertain. All this humanistical knowledge may be considered as belonging to that part of philology, which is practical, and tends the most to the formation of taste. But, if we separate the mere philologist from the humanist, we shall find them to be distinguished from one another in this, that the former seeks in the ancients the instruments of learning, the latter, on the other hand, those of the formation of taste.

The *belles-lettrist* or the *bell'esprit* is a humanist according to contemporary patterns in the living languages. He is therefore, not a man of learning—for none but the dead languages are at present learned ones—but a mere *dilettante* (connoisseur) of the knowledge of taste according to the mode, without standing in need of the ancients. He might be named the ape of the humanist. The polyhistorian must as a philologer be a linguist and a man of literature, and as a humanist, a classical scholar and an expounder of the classics. He, as a philologist, is cultivated, as a humanist, civilized.

With regard to the sciences there are two degeneracies of the reigning taste, pedantry and gallantry. The one applies to the sciences for the school merely, and thereby limits them with respect to their use; the other applies to them for nothing but society or the world and thereby confines them with respect to their matter.

Either the pedant, as a man of letters, is opposed to the man of the world and is a puffed-up man of letters without knowledge of the world, that is, without the knowledge of communicating his science; or he is to be considered as a man of ability in general, but in forms only, not as to the essence and the end. In the latter sense he is a picker of forms; limited with regard to the substance of things, he considers nothing but the outside. He is the unfortunate imitation, or the caricature, of a man of a methodical head. Hence may pedantry be denominated the painfulness and the useless exactness or nicety (micrology) in forms. And a form of the scholastic method out of the school of that sort is to be met with, not only among the learned and in learning, but among other classes and in other things. The *etiquette,* or ceremony of courts, in society—what is it but a hunting after forms? In the army it is not quite so, though it seems so. But in conversation, in dress, in diet, in religion, much pedantry often reigns.

And exactness in forms suitable to the end proposed is profoundness (methodical, scholastic perfection). Pedantry is then an affected profoundness, and gallantry, as a mere courting of the approbation of taste, nothing but an affectation of popularity. For gallantry endeavours but to render itself agreeable to the reader and therefore not so much as to offend him with a hard word.

To avoid pedantry, extensive knowledge, not only in the sciences themselves, but with regard to their use, is required. For which reason nobody but the man of true erudition can detach himself from pedantry, which is always the property of a limited understanding.

In the endeavour to procure to our cognition the perfection at once of the scholastic profundity and of popularity, without committing the above-mentioned fault, either of an effected profundity, or of an affected popularity, we must above all things look to the scholastic perfection of our cognition—the methodical form of profundity—and then first take care, how we can render the methodical cognition learned in the school really popular, that is, so easy and universally communicable to others, that the profundity may not be supplanted by the popularity. For, the scholastic perfection, without which all science were nothing but a toy, must not be sacrificed for the sake of the popular perfection, or to please the people

But in order to learn true popularity we must read the ancients, for instance, Cicero's philosophical writings, the poets, Horace, Virgil, &c.; among the moderns, Hume, Shaftesbury, and many others; men, who had great intercourse with the refined world, without which intercourse it is not possible to be popular. For true popularity requires much practical knowledge of the world, knowledge of the conceptions, of the taste, and of the inclinations of men, upon which, in the exhibition and even in the choice of fit expressions adequate to popularity, constant attention is to be bestowed. A condescendence of that sort to the capacity of the public and to the usual expressions, by which the scholastic perfection is not undervalued, but the dress of the thoughts so ordered, as not to let the scaffold—what is methodical and technical of that perfection—be seen (as we draw with a pencil lines, upon which we write, and then rub them out), this truly popular perfection of cognition is in fact a great and a rare perfection, which betrays much insight in science. And it has, besides many other merits, this one, that it can give a proof of the complete insight into a thing. For the merely scholastic examination of a cognition leaves behind the doubt, Whether the examination be not partial, and whether the cognition itself be of a value granted it by every body. The school, like common-sense, has its prejudices. The one improves the other. It is therefore important to try a cognition with men, whose understandings do not adhere to any school.

This perfection of cognition, by which the cognition is qualified for an easy and a universal communication, might also be termed the external extension, or the extensive greatness of a cognition; provided that it (a cognition) is spread externally among a great number of men.

As there are so many and so various cognitions, one would do well to make a plan for himself, according to which he so orders the sciences, as they may agree the best with his ends and contribute to promote them. All cognitions have a certain natural connexion with one another. If, in the endeavour after enlarging the cognitions, this their coherence is not attended to, the result of all great knowledge will be nothing but a mere rhapsody. But if one makes a principal science his end and considers all other cognitions as means only to accomplish it, he introduces a certain systematical character into his knowledge. And in order to go to work, in the enlarging of our cognitions, according to a plan that is well ordered and suitable to the end proposed, we must try to learn that coherence of the cognitions among one another. A guidance to which is given by the architectonic of the sciences, a system according to ideas, in which the sciences, with regard to their affinity and their systematical conjunction, are considered as a whole of knowledge interesting humanity.

As to the intensive greatness of a cognition, that is to say, its weight or its great value and importance in particular, which, as we have already remarked, is essentially distinguished from the extensive, the mere copiousness, we shall make but these few remarks on it :

1, A cognition, which refers to the greatness, that is, the whole in the use of the understanding, is to be distinguished from the subtilty in the small (micrology).

2, Every cognition that promotes the logical perfection, as to the form, is logically important, for example, every mathematical proposition, every law of nature distinctly known, every right philosophic explication. The practical importance cannot be foreseen, but must be waited for.

3, A cognition may be difficult without being important, and *vice versa.* Difficulty therefore decides neither for, nor against, the value of the importance of a cognition. This depends upon the greatness or the plurality of the consequences. The more or the greater consequences a cognition is productive of, the more use may be made of it, the more important it is. A cognition without weighty consequences is a useless speculation; the scholastic philosophy, for instance, is of this nature.

VII.

B. *Logical Perfection of Cognition, as to Relation. Truth. Material and formal or logical Truth. Criteria of logical Truth. Falsity and Error. Appearance, as the Source of Error. Means to avoid Errors.*

TRUTH is a chief perfection of cognition, nay, the essential and the indispensable condition of all its perfection. Truth, it is said, consists in the agreement of cognition with the object. In consequence of this mere nominal definition, our cognition must, in order to hold good as true, agree with the object. But we can compare the object with our cognition in no other way, than by our knowing it. Our cognition therefore must confirm itself, but which is not near sufficient for truth. For, as the object is out of us and the cognition in us, we never can but judge whether our cognition of the object agrees with the cognition of the object. Such a circle in explaining the ancients named diallele. And the logicians were always reproached with this fault by the sceptics, who remarked, that it is with that definition of truth just as if one should make a deposition before a court and appeal to a witness, whom nobody knows, but who has a mind to render himself worthy of belief by maintaining, that he who has called him as a witness, is an honest man. The accusation indeed is well founded. Only the solution of the aforementioned problem is absolutely impossible.

The question here is, Whether and how far there is a criterion of truth secure, universal, and fit to be used in the application? For that is the meaning of the question, What is truth?

To be able to answer this important question, we must distinguish that, which in our cognition belongs to its matter and refers to the object, from that which regards the mere form, as that condition, without which a cognition would in general be no cognition at all. With respect to this distinction between the objective material and the subjective formal reference in our cognition, the above question divides into the two particular ones:

1. Is there a universal material criterion of truth? and 2. Is there a universal formal one?

A universal material criterion of truth is not possible; it is even contradictory in itself. For, as a universal criterion that holds for all objects in general, it would need totally to abstract from all difference of them, and yet, as a material criterion, to extend to this very difference, in order to be able to determine whether a cognition agrees directly with that object, to which it is referred, and not with any one object in general; by which nothing at all is said. In this agreement of a cognition with that determinate object, to which it is referred, material truth must however consist. For a cognition, which with regard to one object is true, may with regard to other objects be false. It is therefore absurd to require a universal material criterion of truth, which must at once abstract and not abstract from all difference of objects.

But, if the inquiry is after universal formal criteria of truth, the decision, that there may by all means be such, is easy. For formal truth consists entirely in the agreement of cognition with itself with total abstraction from all objects whatever and from all difference of them. And the universal formal criteria of truth consequently are nothing but universal logical marks of the agreement of cognition with itself, or (which is the same thing) with the universal laws of the understanding and of reason.

These formal universal criteria, though not sufficient for objective truth, are to be considered as its *conditio sine quâ non.*

For the question, Whether the cognition agrees with itself (as to the form)? must precede the question, Whether it agrees with the object? And that is the province of logic.

The formal criteria of truth in logic are,

1, the proposition of contradiction, and, 2, that of sufficient reason.

By the former the logical possibility of a cognition is determined, by the latter the logical reality.

To the logical truth of a cognition belong,

First, that it be logically possible, that is, not repugnant to itself. This sign of the internal logical truth however is only negative; for a cognition, which is repugnant to itself, is false, but, when it is not so, not always true; and,

Secondly, that it be logically founded, that is, that it have, a, grounds and, b, not false consequences.

This second criterion of the external logical truth, relative to the logical coherence of a cognition with grounds and consequences, or of the rationalness of cognition, is positive. And the following rules hold here:

1, From the truth of the consequence the truth of the cognition as a ground may be inferred, but only negatively: when one false consequence flows from a cognition, the cognition itself is false. For, were the ground true, the consequence would be so likewise; because the consequence is determined by the ground.

But we cannot infer conversely: when not a false consequence flows from a cognition, it is true; for we can draw true inferences from a false ground.

2, When all the consequences of cognition are true, the cognition also is true. For, were but something false in the cognition, a false consequence too would have place.

From the consequence we may then infer a ground, but without being able to determine it. We can only infer a determinate ground, that it is the true one, from the complex of all the consequences.

The former mode of inference, according to which the consequence can be but a negatively and an indirectly sufficient criterion of the truth of a cognition, is termed in logic the apagogical (*modus tollens*).

This procedure, of which great use is made in geometry, has the advantage, that we need derive but one false consequence from a cognition to prove its falseness. For example, in order to evince, that the earth is not flat, we need, without adducing positive and direct reasons, but infer and conclude apagogically, or indirectly, thus: Were the earth flat, the polestar would be equally high everywhere; but this is not the case; therefore the earth is not flat.

In the other, the positive and direct mode of inference (*modus ponens*), there occurs the difficulty, that the totality of the consequences cannot be known apodictically, and that we therefore are not led by this mode of illation but to a probable and a hypothetically true cognition (ahypothesis)according to the presupposition, that, when many consequences are true, all the others may be so likewise.

We may then lay down here three principles, as universal merely formal, or logical, criteria of truth; they are,

1, the principle of contradiction and of identity, by which the internal possibility of a cognition is determined for problematical judgments;

2, the principle of sufficient reason, upon which the (logical) reality of a cognition depends; that it is founded, as matter for assertive judgments;

3, the principle of the exclusive third (*principium exclusi medii inter duo contradictoria*), in which the (logical) necessity of a cognition is founded; that we must necessarily judge so and not otherwise, that is, that the opposite is false—for apodictical judgments.

The contrary of truth is falsehood which, if it is held truth, is named error. An erroneous judgment (for error as well as truth is only in the judgment) is therefore such a one, as takes the appearance of truth for truth itself.

How truth is possible, is, as the understanding acts here on its essential laws, easily known.

But how error in the formal sense of the word, that is to say, how the form of thinking contrary to the understanding is possible, is difficult to be comprehended, as it is in general not to be comprehended how any one power should deviate from its own essential laws. We can therefore seek the ground of errors just as little in the understanding itself and its essential laws, as in the limits of the understanding, in which the cause of ignorance, but by no means that of error, lies. Had we no other cognitive power, than the understanding, we should never err. But there lies in us yet another indispensable source of cognition, the sensitivity; which supplies us with matter for thinking and acts according to other laws, than the understanding does. But from the sensitivity considered in and by itself, error cannot arise neither; because the senses never judge.

The ground of the origin of all error must consequently be looked for no where but in the insensible influence of the sensitivity on the intellect or, more accurately speaking, on judgment. This influence makes us in judging hold merely subjective grounds objective ones, and by consequence take the mere appearance of truth for truth itself. For therein consists the very essence of appearance which is on that account to be considered as a ground for holding a false cognition true.

What makes error possible is therefore the appearance, according to which the merely subjective in the judgment is exchanged for the objective.

In a certain sense the understanding too, provided that it, for want of the requisite attention to that influence of the sensitivity, is led by the appearance arising from it to hold merely subjective determinatives of judgment objective ones, or to admit that, which is not true but according to laws of, the senactivity, is to be true according to its own laws, may be made the author of errors.

Only the fault of ignorance then lies in the limits of the understanding; the fault of error we have to attribute to ourselves. Nature has denied us much knowledge, she leaves us in the inevitable ignorance of so much; yet she does not occasion error. To it our own propensity to judge and to decide even when we are not able to do so, because of the limitation of our faculties, leads us.

All error however, into which the human understanding can fall, is but partial, and in every erroneous judgment there must always be something true. For a total error were an oppugnancy against the laws of the understanding and of reason.

With regard to what is true and erroneous in our cognition, we distinguish an exact from a crude cognition.

A cognition, when it is adequate to its object, or when with respect to its object not the smallest error has place, is exact; it, when errors may be in it with an impediment to the design, is crude.

This distinction regards the larger or the stricter determinateness of our cognition. At first it is sometimes necessary to determine a cognition in a larger sphere, particularly in historical things. But in cognitions of reason every thing must be exactly *(stricte)* determined. In the large determination it is said, a cognition is determined *præter, propter.*

It always depends upon the purpose of a cognition whether it shall be crudely or exactly determined. The large determination still leaves a latitude for error, but which may have its determinate bounds. Error has place especially when a wide determination is taken for a strict one, for instance, in matters of morality, in which every thing must be strictly determined. Who do not do so are named, by the English, latitudinarians.

From the exactness, as an objective perfection of cognition—as the cognition in this case is fully congruent to the object—the subtility as a subjective perfection of it may still be distinguished.

A cognition of a thing, when one discovers in it what usually escapes the attention of others, is subtile. It consequently requires a higher degree of attention and a greater exertion of the intellectual power.

Many blame all subtility; because they cannot attain it. But it in itself does honor to the understanding, and is, provided that it is applied to an object worthy of observation, even meritorious and necessary. But it, when the same end might be obtained with less attention and effort of the understanding, than is used, is a useless expense; and we fall into subtilties, which are difficult, but of no utility (*nugæ difficiles*).

As the crude is opposed to the exact, the gross is to the subtile.

From the nature of error, in whose conception, as we have already remarked, besides falsity, the appearance of truth is contained as an essential mark, the following rule, which is important to the truth of our cognition, unfolds itself:

In order to avoid errors (and no error is at least absolutely inevitable, though it may be so relatively to the cases, in which it is, even at the risk of erring, unavoidable for us to judge) we must endeavour to discover and to explain the source of them—appearance or semblance. But that few philosophers have done. They have only endeavoured to determine the errors themselves, without shewing the appearance, whence they arise. The discovering and the solving of the appearance, however, is of much greater service to truth, than the direct shewing of errors themselves, by which their source cannot be stopped up, nor can the same appearance, because it is not known, be prevented from leading again to errors in other cases. For, if we are even convinced of having erred, there still remains to us, if the appearance itself, which forms the basis of our error, is not removed, scruples, little as we can adduce to their justification.

Besides, by explaining the appearance we do the erring person a sort of equity. For, nobody will allow, that he has erred without some one appearance of truth, which perhaps might have deceived one more acute; because the stress of the affair rests upon subjective grounds.

An error, when the appearance is obvious to common sense, is termed an insipidity or absurdity The reproach of absurdity is always a personal one, which we must avoid, particularly in the correcting of errors.

For to him, who maintains an absurdity, the appearance, which forms the basis of this evident falsity, is not obvious. This appearance must first be made obvious to him. If he still continues to maintain it, he is insipid indeed; but then nothing more can be done with him. He has thereby rendered himself both incapable and unworthy of all farther instruction and refutation. For we cannot, properly speaking, prove to a person that he is absurd; in this case all reasoning were in vain. When we prove the absurdity we speak no longer to the erring person, but to the rational man. Then, however, the discovery of the absurdity (*deductio ad absurdum*) is not necessary.

An insipid error may likewise be named such a one as nothing, not so much as even appearance, serves it for an excuse; as a gross error is that, which evinces ignorance in common cognition or a want of common attention.

Error in principles is greater than that in their application.

An external mark or an external test of truth is the comparison of our own judgments with those of others; because that which is subjective is not inherent in the same way in all others, by consequence the appearance may be thereby explained. Hence is the incompatibility of the judgments of others with ours to be considered as an external mark of error, and as a hint to investigate our proceeding in judging, but not immediately to reject it on that account. For we may perhaps be right in the thing and wrong in the manner only, that is, the propounding.

Common-sense is in itself too a touchstone, to discover the faults of the artificial use of the understanding; that is to say, to put one's self right in thinking or in the speculative use of reason by common-sense, when the common understanding is used as a test for the purpose of judging of the rightness of the speculative.

Universal rules and conditions of avoiding error in general are, 1. To think for one's self, 2. To conceive one's self in the place of another, and 3. Always to think consistently with one's self. The maxim of thinking for one's self may be distinguished by the denomination of the enlightened way of thinking; that of putting one's self, in thinking, in the place of another, the enlarged; and that of always thinking consistently with one's self, the consequential or solid.

VIII.

C. *Logical Perfection of Cognition as to Quality. Clearness. Conception of a Mark in general. Various sorts of Marks. Determination of the logical Essence of a Thing. Its Distinction from the real Essence. Distinctness, a higher Degree of Clearness. Esthetical and Logical Distinctness. Discrepance between analytic and synthetic Distinctness.*

The human cognition is on the side of the understanding discursive; that is, it is acquired by means of representations, which make a ground of cognition of that which is common to several things, consequently by means of marks, as such. We know things then by marks only.

A mark is in a thing that, which makes up a part of its cognition; or (what amounts to the same) a partial representation, provided that it is considered as a ground of cognition of the whole representation. By consequence all our conceptions are marks and all thinking is nothing but a representing by means of marks.

Every mark may be considered in two points of view:

First, as a representation in itself; and

Secondly, as belonging, as a partial conception, to the whole representation of a thing, and thereby as a ground of cognition of this thing itself.

All marks, considered as grounds of cognition, are of a twofold use; either of an internal, or of an external. The internal use consists in derivation, in order to cognise the thing itself by marks, as its grounds of cognition. The external consists in comparison, provided that we can compare a thing with other things by means of marks according to the rules of identity and of distinction.*

Among the marks there are many specifical distinctions, in which the following classification of those are founded:

1, Analytic or synthetic marks. Those are partial conceptions of the actual conception (which we form to ourselves in this conception), these, partial ones of the merely possible whole conception (which must consequently be first formed by a synthesis of several parts). The former are all conceptions of reason, the latter may be those of experience.

2, Co-ordinate or subordinate. This division of marks regards their connexion beside or under one another.

The marks, if each of them is represented as an immediate mark of the thing, are co-ordinate; and, if one mark is represented only by means of another in the thing, subordinate. The conjunction of the co-ordinate marks so as to amount to the whole of the conception is named an aggregate; the conjunction of the subordinate ones, a series. That, the aggregation of the co-ordinate marks, makes up the totality of the conception, but which, with regard to synthetic empirical conceptions, never can be completed.

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* Not diversity, but distinction or difference is the contrary of identity or sameness; diversity is that of similitude or likeness. Many of our authors confound these contraries. T.

The series of subordinate marks falls, *a parte ante*, or on the side of the grounds, upon insolvable conceptions, which cannot on account of their simplicity be farther dissected; it, *a parte post*, or with respect to the consequences, on the other hand, is infinite; because we have a highest genus, but not a lowest species.

With the synthesis of every new conception in the aggregation of co-ordinate marks the extensive or diffused distinctness increases in the same manner as with the farther analysis of the conceptions in the series of subordinate marks the intensive or deep distinctness does. This sort of distinctness, as it necessarily serves for the profundity or solidity of cognition, is chiefly the business of philosophy and, particularly in metaphysical perquisitions, carried to the highest pitch.

3, Affirmative or negative marks. By those we know what the thing is, by these what it is not.

The negative marks serve to keep us from errors.

Hence are they when it is impossible to err unnecessary, and necessary and of importance in those cases only, when they keep us from an important error, into which we may easily fall. For instance, with regard to the conception of a being like God, the negative marks are very necessary and of moment.

By affirmative marks we have then a mind to understand something; by negative ones (to which all marks whatsoever may be turned) only not to misunderstand or only not to err in it, even should we learn to know nothing of it.

4, Important and fertile or empty and unimportant marks.

A mark is important and fertile when it is a ground of cognition of great and of numerous consequences, partly with regard to its internal use (the use in the derivation) provided that it is sufficient, in order to know by it a great deal of the thing itself; partly with regard to its external use (the use in the comparison) provided that it serves to know, as well the similitude of a thing to many other things, as its diversity from many others.

Besides, we must here distinguish the logical importance and fertility from the practical—utility.

5, Sufficient and necessary or insufficient and contingent marks.

A mark, provided that it suffices always to distinguish the thing from all other things, is sufficient; otherwise it is insufficient, as, for example, the mark of barking of the dog. But the sufficiency of marks, as well as their importance, is to be determined in a relative sense only, with reference to the ends, which are intended by a cognition.

Necessary marks finally are those, which must always be to be met with in the thing represented. Such marks are termed essential too, and stand opposed to the unnessential and contingent, which may be separated from the conception of the thing.

But between the necessary marks there is yet a distinction.

Some of them belong to the thing as grounds of other marks of the very same thing; others again as consequences only of other marks.

The former are primitive and constitutive marks *(essentialia in sensu strictissimo)*; the latter are denominated attributes *(consectaria, rationata)*, and pertain likewise to the essence of the thing, but only with a proviso, that they must first be derived from those its essential parts; as, for instance, the three angles in the conception of a triangle from the three sides.

The unessential marks also are of a twofold sort; they regard either internal determinations of a thing *(modi)*, or its external relations. For example, the mark of learning denotes an internal determination of man; being a master or a servant, only an external relation of him.

The complex of all the essential parts of a thing, or the sufficiency of its marks as to co-ordination or subordination, is the ssence *(complexus notarum* *primitivarum, interne conceptui dato sufficientium; s. complexus notarum, conceptum aliquem primitive constituentium).*

But in this definition we must by no means think here of the real essence or the essence of nature of things, which we never can know. For, as logic abstracts from all the matter of cognition, by consequence from the thing itself, in this science nothing but the logical essence of things can possibly be on the carpet. And this we can easily know. For hereto belongs nothing farther than the knowledge of all the predicates, with regard to which an object is determined by its conception; whereas to the real essence of the thing (*esse rei*) the knowledge of those predicates, upon which, all that belongs as a determinative to its essence depends, is required. If we chuse, for instance, to determine the logical essence of a body, we have no occasion to seek for the data to this in nature; we need but turn our reflection to the marks which, as essential parts (*constitutiva, rationes*), originally constitute its fundamental conception. For the logical essence is nothing but The first fundamental conception of all the necessary marks of a thing (*esse conceptus*).

The first step of the perfection of our cognition, as to quality, is then the clearness of the cognition. The distinctness is a second step, or a higher degree of clearness. This consists in the clearness of the marks.

In the first place, we must in general distinguish here the logical distinctness from the esthetical.

The former depends upon the objective, the latter upon the subjective, clearness of the marks. That is a clearness by conceptions, this a clearness by intuition. The latter species of distinctness consists then in a mere vivacity and intelligibleness, that is to say, in a mere clearness by examples in the concrete (for many things that are not distinct may be intelligible, and conversely, many things that are difficult to be understood, because they refer back to remote marks, whose connexion with intuition is not possible but by a long series, may be distinct).

The objective distinctness often occasions subjective obscurity, and conversely. Hence is the logical distinctness seldom possible but to the disadvantage of the esthetical, and, *vice versa*, the esthetical distinctness by examples and likenesses, which are not quite adequate, but taken according to a certain analogy only, is often hurtful to the logical. And besides, examples in general are not marks, and belong, not as parts to the conception, but as intuitions for the use of the conception only. A distinctness by examples (the mere intelligibleness) is therefore of quite another sort, than the distinctness by conceptions as marks. Perspicuity consists in the conjunction of both, the esthetic or popular, with the scholastic or logical, distinctness. For, by a perspicacious head we understand the talent of a luminous exhibition of abstract and of profound cognitions, suitable to the capacity of common-sense.

In the second place, as to the logical distinctness in particular, it, if all the marks, which collectively taken make up the whole conception, have reached clearness, may be named a complete one. A conception, on the other hand, may be completely distinct, with regard to the totality either of its co-ordinate, or of its subordinate marks. The extensively complete or sufficient distinctness of a conception, which is also termed the amplitude, consists in the total clearness of the co-ordinate marks. The total clearness of the subordinate marks constitutes the intensively complete distinctness—the profundity or solidity.

The former species of the logical distinctness may be denominated the external, the latter the internal completeness of the clearness of the marks. This can be obtained from the pure conceptions of reason only, and from arbitrarious conceptions, but not from empirical ones.

The extensive greatness or quantum of distinctness, provided that it is not abundant, is named precision. The amplitude and the precision together make up the adequateness *(cognitionem, quæ rem adæquat)*; and in the intensively adequate cognition in the profundity conjoined with the extensively adequate one in the amplitude and the precision, the consummate perfection of a cognition *(consummata cognitionis perfectio)* (as to quality) consists.

Since it is the business of logic (as we have already remarked) to render clear conceptions distinct, the question now is, In what manner it does so.

The logicians of the Wolfian school place all the rendering of cognitions distinct in their mere dissection. But all distinctness does not depend upon the analysis of a given conception. It thereby arises with regard to those marks only, which are thought of in the conception, but by no means with regard to the marks, which are first added to the conception as parts of the whole possible conception.

That sort of distinctness, which arises, not by the analysis, but by the synthesis of the marks, is synthetic distinctness. And there is consequently an essential distinction between the two propositions: To form a distinct conception and, To render a conception distinct.

For, when we form a distinct conception, we begin with the parts and proceed from them to the whole. In this case no marks yet exist; we obtain them first by means of the synthesis. From this synthetic procedure then the synthetic distinctness arises, which, as to the matter, enlarges the conception by that, which is superadded to it as a mark in the (pure or empirical) intuition. Both the mathematician and the natural philosopher use this synthetic procedure in rendering the conceptions distinct. For all distinctness of the properly mathematical, as well as of all other empirical, cognition, depends upon an enlargement of it of this sort by a synthesis of the marks.

But, when we render a conception distinct, our cognition by no means increases, as to the matter, by this mere dissection. The matter remains the same; only the form is altered by our doing nothing but distinguishing better, or learning to know with a clearer consciousness that, which lies in the given conception. As by the mere colouring of a map nothing more is added to the map itself; so by the mere clearing-up of a given conception by means of the analysis of its marks, the conception itself is not increased in the least.

The making of objects distinct belongs to the synthesis, the making of conceptions distinct, to the analysis. In the latter the whole precedes the parts, in the former the parts precede the whole. The philosopher renders none but given conceptions distinct. Sometimes one proceeds synthetically, even when the conception, which he has a mind to render distinct in this manner, is already given. This has often place in empirical propositions, provided that we are not satisfied with the marks already contained in a given conception.

The analytic procedure, in order to beget distinctness, about which procedure only logic can be occupied, is the first and the chief requisite in rendering our cognitions distinct. For the more distinct our cognition of a thing is, the stronger and the more efficacious it can be. Only the analysis must not go so far, as at last to occasion the object itself to vanish.

Were we conscious to ourselves of all that which we know, we could not but be astonished at the multitude of our cognitions.

As to the objective value of our cognition in general, the following degrees, according to which it (our cognition) can be increased in this respect, may be conceived:

REPRESENTING something to one's self, is the first degree of cognition or knowledge;

Representing to one's self with consciousness or PERCEIVING (percipere) something, the second;*

KENNING (noscere) † something, or representing to one's self something in comparison of other things as to identity, as well as to distinction, the third;

Kenning with consciousness, that is, COGNISING (cognoscere) something, the fourth. The brute kens objects, but does not cognize them.

UNDERSTANDING (intelligere), that is, cognising by the understanding by means of conceptions, or conceiving of something, is the fifth. This is very distinct from comprehending. We can conceive of many things, though we cannot comprehend them, for example, a *perpetuum mobile,* whose impossibility is shewn in the mechanics.

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* Should not APPREHENDING, or receiving into the empirical consciousness, have a place here and precede perceiving? T.

† Must not we use Kenning here, in order to distinguish between this degree of cognition and the highest degee of holding true, Knowing (scire)? or what other word have we in English? T.

Cognising something by reason, or PERSPECTING (*perspicere*) or having an insight into it, is the sixth. We reach this in few things, and our cognitions grow fewer and fewer, the more we advance them towards perfection in point of value.

COMPREHENDING something, that is, cognising it by reason *à priori,* in the degree sufficient to our purpose, is the seventh and the last. For all our comprehending is but relative, that is to say, sufficient for a certain purpose; we comprehend nothing absolutely. Nothing more than what the mathematician demonstrates can be comprehended; for instance, that all the lines in the circle are proportional. And yet he does not comprehend how it happens, that so simple a figure as a circle has these properties. Hence is the field of conceiving or of the understanding in general much greater, than that of comprehending or of reason.

IX.

Logical Perfection of Cognition as to Modality. Certainty. Conception of Holding-true in general. Modes of Holding-true: Opining, Believing, and Knowing. Conviction and Persuasion. Reserving and Suspending a Judgment. Previous Judgments. Prejudices, their Sources and their chief Sorts.

Truth is an objective property of cognition; the judgment, by which something is represented as true (the reference to an understanding and therefore to a particular subject), is subjective, a holding-true.

Holding-true is in general of a twofold nature: a certain and an uncertain. The certain holding-true or certainty, is conjoined with the consciousness of necessity; the uncertain, on the other hand, or uncertainty, with that of contingency, or of the possibility of the contrary. The latter again is, either subjectively as well as objectively insufficient, or objectively insufficient, but subjectively sufficient. That is termed opinion; this must be named belief.

There are consequently three sorts or modes of holding-true: opining, believing, and knowing. The first is a problematical, the second an assertive, and the third an apodictical, judging. For, what we merely opine we in judging hold with consciousness but problematical; what we believe, assertive, not as objectively necessary, however, but as subjectively so (valid for one's self only); and what we know, apodictically certain, that is, universally and objectively necessary (valid for every body); even suppose the object itself, to which this certain holding-true refers, were a merely empirical truth. For this distinction of the holding-true according to the three modes just mentioned concerns nothing but the judgment with regard to the subjective criteria of the subsumption of a judgment under objective rules.*

Our holding immortality true, for instance, is merely problematical, if we but act as if we were immortal; but assertive, provided we believe, that we are so; and it were apodictical if we all knew, that there is a life after the present.

Between opining, believing, and knowing, then, there is a material distinction, which we shall here explain more closely and more at large.

1. Opining, or holding-true on a ground of cognition, neither subjectively, nor objectively sufficient, may be considered as a previous judging,

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* Subsumpting is, ranking under a given rule (*casus datæ legis*). T.

(*sub conditione suspensiva ad interim*), which cannot well be dispensed with. We must opine before we assume and maintain, but be aware of holding an opinion more than a mere opinion. In all our cognising we for the most part begin with opining. Sometimes we have an obscure presagement* of truth; a thing seems to us to contain marks of truth; we are sensible of its truth before we cognise it with determinate certainty.

But when has mere opining place?—Not in any of the sciences that contain cognitions *à priori;* by consequence neither in the mathematics, nor in the metaphysics, nor in the ethics, but in empirical cognitions only, in the physics, in psychology, and such like; for it is a palpable absurdity to think of opining *à priori*. And in fact nothing would be more laughable, than to opine only in the mathematics. In them, as well as in the metaphysics and in moral philosophy, the object is either to know, or not to know. Hence can matters of opinion never be but objects of a cognition of experience, which cognition is possible in itself, but impossible to us only from the empirical limitations and conditions of our cognitive faculty and according to the degree of it depending upon them, which we possess. The ether of the modern natural philosophers, for example, is a mere matter of opinion. For of this, as of every opinion in general, whatever it may be, we perspect, that the contrary may perhaps be proved: Our holding-true in this case is therefore objectively, as well as subjectively, insufficient, though it, considered in itself, may be rendered complete.

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* The literal translation is Presension, but the Translator prefers sagement as referring more to the understanding, by which only we can discover truth. T.

2. BELIEVING, or holding-true on a ground which is objectively insufficient, but subjectively sufficient, has reference to objects, with regard to which we can, not only know nothing, but opine nothing, nay, not so much as pretend probability, but be merely certain, that it is not contradictory to think of such objects in the manner we do. The rest is a free holding-true, which is not necessary but with a practical view given *à priori*; consequently a holding-true of that which we assume on moral grounds in such a manner, as to be certain, that the contrary never can be proved.*

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* Believing is not a particular source of cognition. It is a sort of incomplete holding-true with consciousness, and distinguished, when considered as limited to a particular sort of objects (*credibilia* or those of belief only), from opining, not by the degree, but by the relation, which it as a cognition bears acting. The merchant, for instance, in order to make a bargain, must not merely opine, that there is something to be gained by it, that is, that his opinion is sufficient for the undertaking at a venture. We have theoretical cognition (of the sensible), in which we can attain certainty, and with regard to all that which we can name human cognition this must be possible. We have similar certain cognitions totally *à priori* in practical laws;

Matters of belief then are, 1, not objects of empirical cognition. Hence can the historical belief,

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but these are founded in a supersensible principle (liberty), as a principle of practical reason, in ourselves. But practical reason is a causality with regard to an object likewise supersensible, the chief good, which is not possible in the sensible world by our power, yet nature as the object of our theoretical reason must harmonize with it; for it is necessary, that the consequence or effect of this idea should be met with in the sensible world. We ought therefore to act in order to realize this end.

We find in the sensible world traces of a wisdom of art; and we believe, that the Cause of the world works with moral wisdom too for the chief good. This is a holding-true, which is sufficient to acting, that is, a belief. We stand in no need of that for acting, according to moral laws, for they are given by practical reason only; but we stand in need of the assumption of a Supreme Wisdom for the object of our moral will, to which we, besides the mere rightfulness of our actions, cannot avoid directing our ends. This is objectively not a necessary reference of our arbitrament, yet the chief good is subjectively necessarily the object of a good (every human) will, and the belief in its attainableness is necessarily presupposed for it.

Between the acquisition of a cognition by experience (*à posteriori*) and by reason (*à priori*) there is no mean. But between the cognition of an object and the mere presupposition of its possibility, there is a mean, either an empirical ground, or a ground of reason to assume its possibility with reference to a necessary extending of the field of possible objects beyond those, whose cognition is possible to us. This necessity does not obtain but when the object is cognised as practical and practically necessary by reason; for, to assume any thing in behalf of the mere enlargement of theoretical cognition, is always contingent. This practically necessary presupposition of an object is that of the possibility of the chief good as the object of the arbitrament, by consequence that of the conditions of this possibility (God, licommonly so named, not be termed belief, in the proper sense, and as such be opposed to knowing;

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berty, and immortality). This is a subjective necessity, to assume the reality of the object on account of the necessary determination of the will. This is the *casus extraordinarius*, without which practical reason cannot maintain itself with regard to its necessary end, and the *favor necessitatis* is of use to it here in its own judgment. It can acquire no object logically, but only oppose what impedes it in the use of this idea which pertains to it practically.

This belief is the necessity of assuming the objective reality of a conception (of the chief good), that is, the possibility of its object as an object of the arbitrament necessary *à priori*. When we consider actions only, we have no occasion for this belief. But if we have a mind to reach by actions the possession of the end possible by them, we must assume, that this end is quite possible. I can only say, that I find myself necessitated by my end according to laws of liberty to assume a chief good in the world as possible, but I can necessitate nobody else by grounds (belief is free).

The belief of reason consequently can never extend to theoretical cognition; for in it the objectively insufficient holding-true is merely opinion. It is merely a presupposition of reason with a subjective, but absolutely necessary practical, view. The mindedness according to moral laws leads to an object of the arbitrament determinable by pure reason. The assuming of the attainableness of this object and consequently of the reality of the cause of its attainableness is a moral belief, or a holding-true, which is free and necessary with a moral view to the completion of its ends.

Fides is, properly speaking, faith *in pacto*, or a subjective confidence in one another, that the one will keep his word to the other—faith and belief. The former, when the *pactum* is made, the latter, when it is to be concluded.

because it may itself be a knowing. Holding-true on testimony is distinguished, neither as to the degree, nor as to the species, from holding-true by one's own experience.

Nor are matters of belief, II, objects of the cognition of reason (cognition *à priori*), either of theoretical cognition, for example, in the mathematics and the metaphysics, or of the practical, in moral philosophy.

Mathematical truths of reason may be believed on testimonies, because error in this case, partly is not easily possible, partly can be easily discovered; but they cannot be known in this manner. Philosophical truths of reason, on the other hand, cannot be so much as believed; they must be only known; for philosophy does not admit of mere persuasion. And, as to the objects of the practical cognition of reason in moral philosophy in particular, the rights and the duties, a mere belief can just as little have place. We must be quite certain whether something is right or wrong, consonant to duty or contrary to it, licit or illicit. In moral things nothing can be done at a venture; nothing resolved on at the risk of infringing the law. For instance, it is not enough for a judge merely to believe, that one accused of having committed a crime has committed

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According to analogy practical reason is (so to say) the promiser, man, the promissary, the good expected from the act, the *promissum*.

it. He must know it (juridically), or he is not influenced by conscience.

III. Only the objects, the holding-true of which is necessarily free, that is to say, not determined by grounds of truth, which are objectively independent of the nature and of the interest of the subject, are matters of belief.

Hence does belief afford, because of the merely subjective grounds, no conviction, which may be communicated and commands universal assent, like the conviction which proceeds from knowing. I only can be certain of the validity and of the immutability of my practical belief in the truth of a proposition, or the reality of a thing is that which, with regard to me, only supplies the place of a cognition, without being itself a cognition.

He, who does not assume that, which it is impossible to know but morally necessary to presuppose, is morally unbelieving: A want of moral interest always forms the basis of this sort of incredulity. The greater the moral mindedness of a man is, the firmer and the more lively will his belief be in all that, which he finds himself forced from the moral interest to assume or presuppose in a practically necessary view.

3. Knowing *(scire)* is holding-true on a ground of cognition, which is both objectively and subjectively sufficient, or certainty, accordingly as it is founded, either in experience (one's own, as well as that of others communicated), or in reason, is

either empirical, or rational: This distinction consequently refers to both the sources, experience and reason, from which all our knowledge is drawn.

The rational certainty (or rather the certainty of reason) is again, either mathematical, or philosophical; that is intuitive, this discursive.

The mathematical certainty is named EVIDENCE, because an intuitive cognition is clearer, than a discursive one. Though the mathematical and the philosophical cognitions of reason are in themselves equally certain, the species of certainty is distinct in them.

The empirical certainty is an original one, provided that we are certain of something from our own experience, and a derived one, if we are so by the experience of others; the latter is usually denominated the historical certainty.

The rational certainty (or rather the certainty of reason) is distinguished from the empirical by the consciousness of the necessity that is conjoined with it; it is therefore an apodictical certainty, whereas the empirical is but an assertive one. We are rationally certain of what we would have perspected *à priori*, of course without all experience. Hence may our cognitions regard objects of experience, and yet their certainty be at once empirical and rational, provided that we cognise an empirically certain proposition from principles *à priori*.

Certainty of reason of every thing we cannot have; but, when it is possible for us to have it, we must prefer it to the empirical certainty.

All certainty is either a mediate, or an immediate one; that is to say, it either requires a proof, or is capable and stands in need of none. Though so much in our cognition is certain but mediately, that is, only by a proof, there must be something indemonstrable, or immediately certain, and all our cognition must set out from immediately certain propositions.

The proofs, upon which all the mediate certainty of a cognition depends, are either direct, or indirect, apagogical. When we prove a truth by its grounds, we give a direct proof of it; and when we from the falsity of the contrary infer the truth of a proposition, an apagogical. But if the latter shall hold good, the propositions must be contradictorily or diametrically opposed to one another. For two propositions but contrarily opposed to one another may be both false. A proof, which is the ground of mathematical certainty, is termed a DEMONSTRATION, and that, which is the ground of philosophical certainty, an ACROAMATICAL proof. The essential parts of every proof in general are its matter and its form; or the argument and the consequence.*

By a SCIENCE the complex of cognition, as a system, is to be understood. It is opposed to the common cognition, that is, the complex of cognition, as a mere aggregate. A system depends upon an idea of the whole, which precedes the parts; in

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[*] That argument, which is the principal ground of perspectting the truth of a proposition, is named, by logicians, the *nervus probandi*. T.

the common cognition, on the other hand, or in the mere aggregate of cognitions, the parts precede the whole. There are historical sciences and sciences of reason.

In a science we often know the cognitions only, but not the things represented by them; consequently there may be a science of that our cognition of which is not a knowing.

The universal result of what has been said of the nature and of the species of holding-true is, That all our cognition is either logical or practical. When we know, that we are divested of all subjective grounds and yet that the holding-true is sufficient, we are CONVINCED logically, or on objective grounds (the object is certain).

The complete holding-true on subjective grounds, however, which in a practical view are equal to objective ones, is likewise conviction, only not logical (it is certain), but practical (I am certain). And this practical conviction or moral belief is often firmer than all knowing. In knowing we listen to contrary grounds, but in believing we do not, because in it objective grounds are not concerned, but the moral interest of the subject is.*

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* This practical conviction then is the belief of reason, which only, in the proper sense, must be named a belief and as such opposed to knowing and to all theoretical and logical conviction in general; because it never can be raised to knowing. Whereas the belief commonly termed historical must, as we have already observed, not be distinguished from knowing; because it, as a species of theoretical or logical holding-true, may itself be a

To conviction PERSUASION, a holding-true on insufficient grounds, which we do not know whether they are merely subjective or objective at the same time, stands opposed.

Persuasion often precedes conviction. We are conscious to ourselves of many cognitions but in such a manner, that we cannot judge whether the reasons of our holding-true are objective, or subjective. We therefore must, in order to be able from mere persuasion to reach conviction, first reflect, that is, see to what cognitive power a cognition belongs, and then investigate, that is, prove whether the reasons are sufficient, or insufficient, with regard to the object. Many rest satisfied with persuasion, some reflect, but few investigate. Whoever knows what pertains to certainty does neither easily confound persuasion and conviction, nor allow himself to be persuaded. There is a determinative to approbation, which determinative is composed of both objective and subjective grounds, and this mixed effect the greater number of mankind do not disentangle.

Though every persuasion, as to the form (*for-*

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knowing. We can assume an empirical truth on the testimony of others with the same certainty, as if we had attained it by facts of our own experience. In the former sort of empirical knowing, as well as in the latter, there is something fallacious.

The historical or mediate empirical knowing depends upon the certitude of the testimonies. To the requisites of an unexceptionable witness sufficient capacity and integrity belong.

maliter) is, if an uncertain cognition seems by it to be certain, false, it, as to the matter *(materialiter)*, may be true. And thus is it distinguished from opinion, which, if it is held certain, is an uncertain cognition.

The sufficiency of holding-true (in believing) may be put to the test either by betting, or by making oath. To the former comparative, to the latter absolute, sufficiency of objective reasons is necessary, instead of which however, when they do not exist, an absolutely subjectively sufficient holding-true is valid or holds good.

We often use the phrases, To yield to one's judgment; to reserve, to suspend or to give up one's judgment. Those and similar phrases seem to denote, that there is something arbitrarious in our judging, by our holding something true, because we have a mind to do so. The question here therefore is, Whether volition have an influence on our judgments?

The will has no influence on holding-true immediately; otherwise it were very absurd. When it is said, We believe willingly what we wish, it signifies but our good wishes, for instance, those of the father with regard to his children. Had the will an immediate influence on our conviction of what we wish, we should be constantly forming chimeras of a happy state, and would then hold them always true. But the will cannot contest convincing proofs, which are contrary to our wishes and our inclinations.

But, as far as the will either excites the understanding to the investigation of a truth, or withholds it from it, we must grant it (the will) an influence on the use of the understanding, and by consequence mediately on conviction itself, as it depends so much upon the use of the understanding.

But as to the suspending or reserving of our judgment in particular, it consists in the intention not to allow a merely previous judgment to become a determining one. A PREVIOUS JUDGMENT is a judgment, by which I represent to myself, that there are more reasons for the truth of a thing, than against it; but that these reasons do not suffice to a determining or definitive judgment, by which we decide directly for truth. Previous judging then is a judging merely problematical with consciousness.

The reservation of a judgment may take place with a twofold design; either to seek for the reasons of the determining judgment; or in order never to judge. In the former case the suspension of the judgment is named a critical one (*suspensio judicii indagatoria*); in the latter, a sceptical. For the sceptic disclaims all judging; whereas the true philosopher, if he has not sufficient reasons for holding something true, but suspends his judgment.

To suspend one's judgment according to maxims, an exercised judgment, which is not found but at an advanced age, is required. The reservation of our approbation is in general a very difficult thing, partly because our understanding is so desirous of enlarging itself and of enriching itself with knowledge by judging, partly because we have always a greater propensity to certain things, than to others. But whoever has been often obliged to retract his approbation and is thereby grown prudent and circumspect, does not bestow it so quickly, for fear of being under the necessity of retracting his judgment afterward. This retraction is always a mortification, and a reason of being diffident of all other knowledge.

We have still to notice here that, to let one's judgment remain *in dubio,* and to let it remain *in suspenso,* are not identical. In this we always take an interest in the thing; but in that it is not always suitable to our end and our interest to decide whether the thing is true or not.

Previous judgments are very necessary, nay, indispensable to the use of the understanding in all meditation and all investigation. For they serve to guide it in them and to furnish it with various means.

When we meditate on an object we must always judge previously and, as it were, get the scent of the cognition we are to acquire. And if one's objects are inventions and discoveries, he must always make a previous plan for himself; else his thoughts are employed at random. Hence may be conceived by previous judgments maxims for the investigation of a thing. They might be named anticipations too; because one anticipates his judgment of a thing before he knows what must determine it. Such judgments are therefore of great utility; and even rules how to judge of an object previously might be given.

Prejudices must be distinguished from previous judgments.

Previous judgments, if adopted as principles, are PREJUDICES. Every prejudice is to be considered as a principle of erroneous judgment, and not prejudices, but erroneous judgments arise from prejudices. The false cognition, which arises from a prejudice, must therefore be distinguished from its source, the prejudice. The bodement of dreams, for example, is in itself not a prejudice, but an error, which arises from the received general rule: What falls out according to expectation a few times, does so always or is for ever to be held true. And this principle, from which the bodement of dreams flows, is a prejudice.

Prejudices are sometimes true previous judgments; only their serving us for principles or for determining judgments, is wrong. The reason of this illusion is to be looked for in subjective grounds' being falsely held objective ones, from a want of reflection that must precede all judging. For, though we may assume several cognitions, for instance, the immediately certain propositions, without investigating them, that is, without proving the conditions of their truth, we judge of nothing without reflecting, that is to say, without comparing a cognition with the cognitive faculty (the sensitivity or the understanding) whence it must needs arise. If we assume judgments without this reflection, which is even necessary when no investigation has place, prejudices, or principles for judging for subjective reasons, falsely held objective ones, arise therefrom.

The principal fountains of prejudices are, imitation, custom or assuetude, and inclination.

Imitation has a universal influence on our judgments; for it is a strong reason to hold true that, which others have given out to be so. Hence the prejudice, What every body does is right. As to the prejudices, which arise from custom; they can be extirpated by length of time only, by the understanding, stopped and detained by little and little in judging by contrary reasons, by the understanding's being thereby brought by degrees to an opposite way of thinking. But if a prejudice of custom originates in imitation too, it is difficult to cure the person who is filled with it. A prejudice from imitation may likewise be named, a propension to the passive use of reason or to the mechanism of reason, instead of its (reason's) spontaneity under laws.

Reason is an active principle, which must take nothing from the authority of others, not even, when its pure use is concerned, from experience. But the indolence of a great many makes them chuse rather to tread in the footsteps of others, than to take the trouble of exercising their own intellectual faculties. Such men never can be but copies of others, and were every body of this sort, the world would remain for ever upon the same spot without making farther progress. It therefore is highly necessary and important not to confine youth, as it is usually done, to mere imitating.

There are so many things, which contribute to accustom us to the maxim of imitation and thereby to make reason a soil fertile in predudices! To such aids of imitation pertain,

1. **Formules**, which are rules, whose expression serves for a pattern for imitation. Besides, they are very useful for the purpose of ease in intricate propositions, and therefore the most acute endeavour to find out rules of this sort.

2. **Sayings**, or aphorisms, which express a pregnant sense with so great precision, that it seems the sense cannot be comprised in fewer words. These sayings (*dicta*), which must always be taken from others, to whom a certain infallibility is ascribed, serve, because of this authority, for a rule and a law. The *dicta* of the bible are denominated κατ' εξοχην sayings.

3. **Sentences**, or propositions, which, as productions of a mature judgment, recommend themselves and often, by the energy of the thoughts they contain, maintain their credit for centuries.

4. **Canons**, which are universal didascalic propositions that serve for a basis to the sciences, and express something well digested and sublime. That

they may please the more, they may be expressed in a sententious manner, and,

5. PROVERBS, or adages, which are popular rules of common-sense, or expressions of its popular judgments. As such merely provincial propositions serve none but the vulgar for sentences and canons, they are not used among those of a more liberal education.

From the aforesaid three universal sources of prejudices, and especially from imitation, many particular prejudices have their issue. We shall here touch on the following only, as the most common ones:

I. Prejudices of authority. Under this head may be ranked,

a, the prejudice arising from the authority of a person. When we, in things that depend upon experience and upon testimonies, build our knowledge upon the authority of other persons, we cannot on that account be accused of any prejudice; for in things of this sort the authority of a person must, as we cannot experience every thing ourselves and embrace it with our own understanding, be the foundation of our judgments. But, when we make the authority of others the ground of our holding-true with regard to cognitions of reason, we assume these cognitions on a mere prejudice. For truths of reason hold anonymously; relatively to them the question is, not Who said it, but What is said (*non quis, sed quid*)? It is of no consequence whether a cognition be of a noble extraction or not; but yet the propension to the prejudice arising from the authority of great men is very common, partly because of the limitation of one's own insight, partly from a desire of imitating that, which is described to us as great. Besides, the authority of the person serves to flatter our vanity in an indirect manner. As, for instance, the subjects of a potent despot are proud of being treated all alike by him, for the least may consider himself so far equal with the greatest, as both of them are nothing in comparison of the illimited power of their ruler; the admirers of a great man judge themselves equal, if the merits, which they may possess among themselves, are to be considered as insignificant in comparison of his pre-eminence. Hence do the highly finished extolled great men feed the propensity to the prejudice of the authority of a person not a little on more than one ground.

b, The prejudice arising from the authority of a multitude. To this prejudice the populace in particular are inclined. For they, not being able to judge of the merits, abilities, and knowledge of a man, rather abide by the judgment of a multitude, on the presupposition that, 'What every body says must be true.' Yet this judgment has reference with them to nothing but historical things; in matters of religion, in which they themselves are interested, they rely upon the judgment of the learned.

It is remarkable, that the ignorant are in general prepossessed in favor of learning, and that the learned, on the other hand, are so in favor of common-sense.

When all the endeavours of a man of letters, after he has pretty well gone through the circle of the sciences, do not afford him the proper satisfaction, he at last grows diffident of learning, particularly with regard to those speculations, in which the conceptions cannot be rendered sensible, and whose foundation is not solid, as, for example, in the metaphysics. But, as he thinks the key to truth in certain objects must be to be found somewhere, he, after having looked for it so long in vain in the way of the scientific investigation, seeks it in common-sense.

But this hope is very fallacious; for when the cultivated faculty of reason can effectuate nothing with regard to the cognition of certain things, the uncultivated will certainly do it just as little. Every where in the metaphysics the appeal to the decisions of common-sense is quite inadmissible; because in them no case can be exhibited in the concrete. But in moral philosophy it is not so. In it not only all the rules can be given in the concrete, but practical reason reveals itself in general more clearly and rightly by the organ of the common use of the understanding, than by that of the speculative. Hence does the common understanding often judge righter of matters of morality, than the speculative.

c. The prejudice of the authority of the age. In this class of prejudices the prejudice of antiquity is one of the principal ones. We no doubt have reason to judge favourably of antiquity; but it is only a reason for a moderate reverence, whose bounds we but too often pass, by our making the ancients, so to say, treasurers of cognitions and of the sciences, raising the relative value of their writings to an absolute one, and trusting ourselves blindly to their guidance. To esteem the ancients so excessively is, to reduce the understanding to its years of infancy and to neglect the use of one's own talent. And we would lie under a great mistake if we should believe, that all the ancients wrote in so classic a manner, as those, whose writings have reached us, have done. As time sifts every thing, and as nothing but that, which is of an intrinsic value, is preserved, we may presume, not without reason, that we possess no writings of the ancients but the best.

There are several reasons for the begetting and the maintaining of the prejudice of antiquity.

When something exceeds expectation according to a universal rule, one at first wonders at it and then this wondering often passes to admiration. That is the case with regard to the ancients, when we find in them something that, considering the circumstances of the time in which they lived, we did not look for. Another reason lies in this circumstance, that the knowledge of the ancients and of antiquity shews learning and having read much; which, common and insignificant as the things that have been drawn from the study of the ancients may be in themselves, always procures respect. A third reason is, the gratitude we owe the ancients for having broken the ice for us to much knowledge. For which it should seem equitable to hold them in particular veneration, but whose measure we often exceed. A fourth reason finally is to be sought in a certain envy of one's contemporaries. Whoever cannot cope with the moderns, praises at their expense the ancients to the skies, that the moderns may not be able to raise themselves above him.*

The prejudice of novity is the contrary to that. The authority of antiquity and the prejudice in its favor fell now and then; particularly at the beginning of the century before the last, when the celebrated Fontenelle declared for the moderns. With respect to cognitions susceptible of enlargement, it is very natural for us to put more confidence in the moderns, than in the ancients. But this judgment has only a foundation as a mere previous judgment. If we make it a determining one, it becomes a prejudice.

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* This last reason seems quite applicable to our author's own enemies, and envy to be the only secret spring of their impotent opposition. But, as this venerable old man is now sunk into the grave, "Envy will drop her snakes, and stern-eyed Fury's self will melt." T.

2, Prejudices from self-love, or logical egotism, according to which one holds the agreement of his own judgment with the judgments of others an unnecessary criterion of truth. They, as they manifest themselves by a certain predilection to what is a production of one's own understanding, for instance, one's own system, are opposed to the prejudices of authority.

Whether is it good and adviseable to let prejudices remain, or even to favor them? It is astonishing, that in our age such questions, especially this one with regard to favoring prejudices, should still be put. Favoring one's prejudices, is just as much as deceiving one with a good view. To leave prejudices untouched, however, may be done; for who can occupy himself about discovering and about removing the prejudices of every body? But whether it is not adviseable to labour at their extirpation with all one's might?—is another question. Old and rooted prejudices are difficult to be overcome; because they exculpate themselves and are, as it were, their own judge. And letting prejudices remain is endeavoured to be excused by saying, that mischief would be occasioned by their extirpation. But, admitting this mischief;—it (this extirpation) will be productive of great good hereafter.

X.

Probability. Explication of the Probabilities. Distinction of Probability from Verisimilitude. Mathematical and Philosophical Probability. Doubt both subjective and objective. Sceptical, Dogmatical, and Critical Way of Thinking or Method of Philosophising. Hypothesis.

THE doctrine of the knowledge of the probabilities which are to be considered as an approximation to certitude, belongs to the doctrine of the certainty of our knowledge.

By PROBABILITY, a holding-true on insufficient grounds, but which have a greater relation to sufficient ones, than the grounds of the contrary, is to be understood. By this explication we distinguish probability from mere VERISIMILITUDE or likelihood, a holding-true on insufficient grounds, provided that they are greater, than the grounds of the contrary.

The ground of holding-true may be either objectively, or subjectively, greater, than that of the contrary. Which of the two it is cannot be found out but by comparing the grounds of holding-true with the sufficient grounds; for then the grounds of holding-true are greater, than those of the contrary can be. In probability the ground of holding-true therefore holds objectively; in verisimilitude, on the other hand, only subjectively. Verisimilitude is only a greatness of persuasion, probability an approximation to certainty. Probability must always have a scale. For, as we are to compare the insufficient grounds with the sufficient ones, we must know how much is requisite to certainty. But no scale is necessary to mere verisimilitude; because in it we compare the insufficient grounds, not with the sufficient ones, but with those of the contrary.

The points *(momenta)* of probability may be either homogeneous, or heterogeneous. If they are the former, as in the mathematical cognition, they must be numbered; if the latter, as in the philosophical, pondered, that is, estimated according to the effect; but this after removing the impediments in the mind. The latter yield no relation to certainly, but only the relation of one verisimilitude to another. Hence it follows, that the mathematician only can determine the relation of insufficient grounds to the sufficient holding-true. For, in the philosophical cognition, probability cannot be estimated on account of the heterogeneity of the grounds; in it the weights, so to say, are not all stamped. In strict propriety, it can therefore be said but of the mathematical probability, that it is more than the half of certainty.

Much has been said of a logic of probability. But it is not possible; for, when the relation of the insufficient grounds to the sufficient ground cannot be mathematically weighed, no rules are of any assistance. And no universal rules of probability whatever can be given, except that the error does not happen on one side, but a ground of agreement must be in the object; as also that, when two opposite sides err in both an equal number and an equal degree, the truth lies in the middle.

DOUBT is a contrary reason for holding-true or a mere impediment to it, which may be either subjectively, or objectively considered. Doubt is sometimes taken subjectively as a state of an irresolute mind, and objectively as the knowledge of the insufficiency of the reasons for holding-true. In the latter respect it is named an OBJECTION, that is, an objective reason of holding a cognition held true false.

A merely subjectively valid contrary reason for holding-true is a SCRUPLE. As to it, one does not know whether the impediment to holding-true is grounded objectively, or but subjectively, for instance, only in inclination, in custom, and such like. We doubt without being able to explain ourselves and determinately with regard to the reason of doubting and without being able to perspect whether this reason lies in the object itself, or but in the subject. If it shall be possible to remove such scruples, they must be raised to the distinctness and the determinateness of an objection. For certainty is brought to distinctness and to completeness by objections, and nobody can be certain of a thing unless contrary reasons, by which it can be determined how far one is from the truth or how near it, are assigned. And it is not enough merely to answer every doubt; it must be resolved too, that is, it must be made comprehensible how the scruple arose. If that is not done, the scruple is only put off, but not removed; the seed of doubting still remains. In many cases indeed we cannot know whether the impediment to holding-true in us has subjective or objective grounds, and consequently cannot remove the scruple by discovering the false appearance; because we can compare our cognitions not always with the object, but often with one another only. It is therefore modest not to offer one's objections but as doubts.

There is a principle of doubting, which consists in the maxim, 'to treat cognitions with the view of rendering them uncertain and of shewing the impossibility of coming at certainty.' This method of philosophising is the sceptical cast of mind, or SCEPTICISM. It is opposed to the dogmatic way of thinking, or DOGMATISM, which is, 'a blind confidence in the faculty of reason's enlarging itself *à priori* by mere conceptions, barely from the seeming success.'

Both methods, when they become universal, are faulty. For there is much knowledge, with respect to which we cannot proceed dogmatically; and scepticism, on the other hand, by its giving over all affirmative cognition, baffles all our efforts to acquire the possession of a knowledge of the certain. But pernicious as this scepticism is, the sceptical method, provided that nothing farther is understood by it, than the mode of treating something as uncertain and of reducing it to the greatest uncertainty in the hope of thus tracing truth, is both useful and suitable to the end proposed. This method then is, correctly speaking, a mere suspension of judging. It is very useful to the CRITICAL procedure, by which 'that method of philosophising, whereby we investigate the sources of our assertions or of our objections and the grounds upon which they depend,' is to be understood;—a method, which affords a hope of coming at truth.

In the mathematics and the physics scepticism has not place. Only that cognition, which is neither mathematical, nor empirical, pure philosophy, could have occasioned it. Absolute scepticism gives out every thing for appearance. It therefore distinguishes appearance from truth and of course must have a mark of distinction; consequently presuppose a knowledge of truth; by which it contradicts itself.

We have already noticed of probability, that it is a mere approximation to certainty. And that is likewise the case with hypotheses in particular, by which we can arrive at, never an apodictical certainty in our knowledge, but always sometimes a greater, sometimes a smaller degree of probability only.

A HYPOTHESIS is A holding of the judgment of the truth of a ground true for the sake of the sufficiency of the consequences; or, shorter, The holding of a presupposition true as a ground.

All holding true in hypotheses is consequently founded in the presupposition's being sufficient, as a ground, to explain other cognitions, as consequences. For in that case we infer the truth of the ground from that of the consequence. But, as this mode of inference, as above-mentioned, cannot give a sufficient criterion of truth and lead to an apodictical certainty but when all the possible consequences of an assumed ground are true, it is obvious that, as we never can determine all the possible consequences, hypotheses always remain hypotheses, that is, presuppositions, at whose full certainty we never can arrive. The probability of a hypothesis, however, may, when all the consequences, which have hitherto occurred to us, can be explained on the presupposed ground, increase and raise itself to an analogon of certainty. For in such a case there is no reason why we should suppose, that all the possible consequences cannot be explained from it. In this case we therefore submit to the hypothesis, as if it were quite certain, though it is not so but by induction.

And yet something must be apodictically certain in every hypothesis;

1. The possibility of the presupposition itself. When, for example, we suppose a subterraneous fire for the explication of earthquakes and of vol-

canos; a fire of that sort must be possible, if not just as flaming, as an ardent body. But for the behoof of certain other phenomena to make an animal of the earth, in which the circulation of the internal fluids causes the heat, is to erect a mere fiction and not a hypothesis. For realities may be feigned, but not possibilities; these must be certain.

2. The consequence. The consequences must flow right from the assumed ground; else the hypothesis becomes a mere chimera.

3. The unity. It is an essential requisite of a hypothesis, that it be but one and stand in need of no subsidiary hypotheses for its support. If in a hypothesis we are under the necessity of calling in the assistance of several other hypotheses, it thereby loses very much of its probability. For the more consequences that may be inferred from a hypothesis there are, the more probable it is; the fewer, the more improbable. The hypothesis of Tycho de Brahe, for instance, did not suffice to the explanation of many phenomena; he therefore used several new hypotheses for the purpose of completing. In this case it may be conjectured, that the adopted hypothesis cannot be the genuine ground. Whereas the Copernical system is a hypothesis, from which every thing that is intended to be explained by it (so far as it has hitherto occurred to us) may be explained. In it we have no occasion of subsidiary hypotheses.

There are sciences, which do not allow of hypotheses; as, for example, the mathematics and the metaphysics. But hypotheses in natural philosophy are both useful and indispensable.

APPENDIX.

*Of the Distinction of theoretical and of practical Cognition.**

A cognition is denominated practical in contradistinction to not only the theoretical, but the speculative cognition.

Practical cognitions either are,

1. Imperatives and in this view opposed to the theoretical cognitions; or comprise,

2. the grounds to possible imperatives, and are in this view opposed to the speculative cognitions.

By IMPERATIVE in general every proposition that expresses a possible free action, by which a certain end is to be realized, is to be understood. Every cognition, then, which contains imperatives, is PRACTICAL and to be termed so in contradistinc-

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[*] The distinction made, in the critical philosophy, between what is practical and what belongs to the praxis, must be well attended to. We consider something theoretically when we have in view that only, which pertains to a thing, but practically, when we reflect on what ought to pertain to it through liberty. Theory is, Principles of procedure represented in the general; Praxis, Application to cases occurring in experience. A physician, for instance, when he endeavours to cure his patients according to his theory, exercises the praxis of medicine. T.

tion to the theoretical cognition. For THEORETICAL cognitions are such as express, not what must be and ought to be, but what is; consequently have for their object, not an acting, but a being or an existing.

If on the contrary we oppose the practical cognitions to the speculatives ones, they may be theoretical too, provided that imperatives can be deduced from them. They are then, considered in this respect, as to the value (*in potentia*) or objectively, practical. By SPECULATIVE cognitions we understand those, from which no rules of conduct can be derived, or which comprise no grounds for possible imperatives. In theology, for example, there are a great number of the like merely speculative propositions. Speculative cognitions of that sort then are always theoretical; but not conversely; every theoretical cognition is not speculative; it may, considered under another point of view, be at the same time practical.

Every thing tends at last to the practical; and the practical value of our cognition consists in this tendence of all that which is theoretical and of all speculation with regard to their use. This value however is not an inconditional one but when the end, to which the practical use of the cognition is directed, is an inconditional end. MORALITY is the only inconditional and ultimate end (scope), to which every practical use of our cognition must finally be referred, and we on that account denominate morality the absolute practical. And that part of philosophy, which has morality for its object, must therefore be, by way of eminence, named PRACTICAL PHILOSOPHY; though every other philosophical science may always have its practical part, that is, may contain a direction to the practical use of the erected theories for realizing certain ends.

And thus much with regard to cognition, as preparatory to the study of logic. We now proceed to logic itself, a dry, but a short science.

LOGIC

PART THE FIRST.

General Doctrine of Elements.

SECTION THE FIRST.

Conceptions.

§ I.

Conception in general and its Distinction from Intuition.

ALL Cognitions, that is, representations referred with consciousness to an object, are either intuitions, or conceptions.

An intuition is a single, a conception a universal *(per notas communes)* or reflected-on *(disursiva)*, representation..

The cognition or knowledge by conceptions is termed thinking *(cognitio discursiva)* or cogitation.

Scholion I. The conception is opposed to the intuition; for that, as aforesaid, is a universal representation or a representation of that which is common to several objects, consequently a representation, provided that it can be contained in various ones.

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* Very little reflection, and a very slight knowledge of logic will suffice to shew the fault of treating Perception in this section of the Doctrine of Elements instead of Conceptions, T.

2. It is mere tautology to speak of universal or of common conceptions; a fault, which originates in a wrong division of conceptions into universal, particular, and single. Not the conceptions themselves, but their use, can be thus divided.

2.

Matter and Form of Conceptions.

Matter and form are to be distinguished in every conception. The object is the matter of the conception; the universality, its form.

3.

Empirical and Pure Conceptions.

A conception is either an empirical, or a pure *(intellectualis)* one. A pure conception is one, which is not taken from experience, but arises, as to the matter too, from the understanding.

An idea is a conception of reason, whose object cannot be met with in experience.*

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* As in our language far too vague a sense is affixed to the word Idea, the following gradation of representation used in the critical philosophy will shew its proper and original Platonic meaning: Representation, that is, internal determination of

Scho. I. An empirical conception arises out of the senses by the comparison of the objects of experience, and obtains by the understanding merely the form of universality. The reality of these conceptions depends upon actual experience, whence they, as to their matter, are drawn. But, whether there are pure conceptions of the understanding, which, as such, entirely spring from the intellect independently of all experience, metaphysic must investigate.

2. The conceptions of reason, or ideas, can lead to no real objects at all; because all these must be comprehended in a possible experience. But they serve to guide the understanding by means of reason with regard to experience and to the use of its

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our mind in any relation of time, in general, is the genus. Under it Perception, a representation with consciousness, ranks. Sensation is a perception, which refers to the subject only, as the modification of his state; Cognition, an objective perception. This is either Intuition or Conception. The former has an immediate reference to the object and is single; the latter, a mediate one, by means of a mark, which may be common to several things. A conception is, as mentioned in the text, either empirical, or pure, and a pure conception, provided that it has its origin in the understanding only (not in the pure image of the sensitive faculty) is styled a Notion. A conception from notions, which surmounts the possibility of the reach of experience, is termed an Idea, or a conception of reason. To one accustomed to this accurate distinction it must be insupportable to hear the representation of the red colour named an idea; it cannot so much as be named a notion, or a conception of the understanding (See Kant's Criticism on pure Reason). T.

rules in full perfection, and to shew, that all possible things are not objects of experience, and that the principles of its possibility do not hold of things in themselves, nor even of objects of experience as things in themselves *(in se)*.

An idea contains the archetype of the use of the understanding, for instance, the idea of the universe, which must be necessary, not as a constitutive principle for the empirical use of the understanding, but as a regulative one in behalf of the thorough coherence of the empirical use of our intellect. It is then to be considered as a necessary fundamental conception, in order either to complete objectively, or to consider the intellectual operations of subordination as interminate or unbounded. And an idea cannot be obtained by composition; for in it the whole is before the part. Yet there are ideas, to which an approximation has place. That is the case with the mathematical ideas, or those of the mathematical generation of the whole, which are materially distinguished from the dynamical ones that are heterogeneous to all concrete conceptions; because the whole is distinct from these conceptions, not as to quantity (as in the mathematical conceptions), but as to quality.

We cannot furnish any theoretical idea with objective reality or prove the objective reality of any theoretical idea, but the idea of liberty; because it is the condition of the moral law whose reality is, so to say, an axiom. The reality of the idea of God cannot be proved but by it (liberty) and therefore with a practical view only, that is, so to act, as if there were a God; consequently for this purpose only.

In all sciences, especially those of reason, the idea of the science is its universal sketch or contour; of course the sphere of all the cognitions that belong to it. Such an idea of the whole, the first thing we have to look for and to consider in a science, is architectonic, as, for example, the idea of the science of law.

The idea of humanity, that of a perfect commonwealth, that of a happy life, that of many other things, is wanting to most men. Many men have no idea of (to use the common expression) what they would be at; hence do they proceed according to instinct and to authority.

4.

Conceptions given (à priori or à posteriori) and factitious Conceptions.

All conceptions are, as to the matter, either given, or factitious ones. The former are given either *à priori*, or *à posteriori*.

All empirical conceptions, or those given *à posteriori*, are named conceptions of experience; those given *à priori*, notions.

Scho. I. The form of a conception as a discursive representation, is always factitious.

5.

Logical Origin of Conceptions.

The origin of conceptions, as to the mere form, depends upon reflection and upon abstraction from the difference of the things betokened by a certain representation. And consequently the question, What operations of the understanding constitute a conception, or (which amounts to the same thing) belong to the begetting of a conception from given representations? naturally occurs here.

Scho. I. As universal logic abstracts from all the matter of cognition by conceptions, or from all the matter of thinking, it cannot weigh the conception but with regard to its form, that is, but subjectively; not how it determines an object by a mark, but how it can be referred to several objects. Universal logic by consequence has to investigate not the source of conceptions, not how conceptions arise as representations, but how given representations become conceptions in thinking; it is all one, whether these conceptions contain any thing either taken from experience, or fictitious, or taken from the nature of the understanding. This logical origin of conceptions—the origin as to their mere form—consists in the reflection, by which a representation common to several objects *(conceptus communis)* arises, as that form, which is required to judgment. In logic therefore nothing but the distinction of reflection is considered in the conceptions.

2. The origin of conceptions with respect to their matter, according to which a conception is either empirical, or arbitrable, or intellectual, it is the province of metaphysic to consider.

6.

Logical Acts of Comparison, of Reflection, and of Abstraction.

The logical acts of the understanding, by which conceptions as to their form are engendered, are,

1, the comparison, or the comparing of representations with one another in relation to the unity of consciousness;

2, the reflection, or reflecting how various representations may be comprehended in one consciousness; and, finally,

3, the abstraction, or the separation of all that by which the given representations are distinguished from one another.

Scho. 1. In order to form conceptions from representations, then, we must be able to compare, to reflect, and to abstract; for these three logical operations of the understanding are the essential and the universal conditions of the engendering of every conception in general. We see, for example, a birch, a lime, and an oak. When we first compare these objects together we mark, that they are different from one another in respect to the trunk, the arms, the branches, the leaves, and abstract from their size, their figure, &c., in this manner we obtain the conception of a tree.

2) The word abstraction is not always used right (in German) in logic. We must say, not to abstract, but to abstract from, something. When, for instance, we think of the red colour only of scarlet cloth, we abstract from the cloth; if we abstract from the colour too and conceive of the scarlet as a substance in general, we abstract from still more determinations, and our conception is thereby become yet more abstract. For the greater the number of the differences of things left out of a conception, or the greater the number of the determinations in it abstracted from, is, the more abstract the conception. Hence should abstracting conceptions, in strict propriety, be termed abstracting ones, that is to say, conceptions, in which several abstractions occur. The conception of body, for instance, is, properly speaking, not an abstract conception; for, from body itself we can by no means abstract, else we should not have a conception of it. But, in order to have it, we must by all means abstract from the size, the colour, the rigidity or the fluidity, in a word, from all the special determinations of particular bodies. The most abstract conception is that which has nothing in common with any thing distinct from it. It is the conception of something; for nothing is distinct from it, and of course has not any thing in common with it.

3. Abstraction is but the negative condition on which universally valid representation can be generated; comparison and reflection are the positive conditions. For no conception is produced by abstraction; this but finishes that and confines it within its determinate bounds.

7.

Matter and Sphere of Conceptions.

EVERY conception, as a partial one, is contained in the representation of things; but, as the ground of cognition, that is, the mark, these things are contained under it. In the former respect every conception has matter; in the latter, a sphere.

The matter and the sphere of a conception bear one another a converse relation. The more a conception contains under it, the less it contains in itself, and *vice versa*.

Scho. The universality, or the universal validity of a conception, depends upon the conception's being, not a partial one, but a ground of cognition.

8.

Greatness of the Sphere of Conceptions.

THE sphere of a conception is the greater, the greater the number of things that rank under it and can be thought of by it is.

Scho. As it is said of a ground in general, that it contains the consequence under it; it may likewise be said of a conception that it, as a ground of cognition, contains under it all those things, from which it has been obtained by means of abstraction, for instance, the conception of metal contains gold, silver, copper, &c. under it. For, as every conception, as a universally valid representation, comprises that which several representations of different things have in common, all these things, which are in this view contained under it, may be represented by it. And just that constitutes the utility of a conception. The greater the number of things that can be represented by a conception is, the greater its sphere. The conception of body, for example, has a greater sphere, than that of metal.

Superior and Inferior Conceptions.

Conceptions, if they have under them other conceptions, which in relation to them are named inferior ones, are denominated superior ones. A mark of a mark, a remote mark, is a superior conception; a conception, in respect to a remote mark, an inferior one.

Scho. As superior and inferior conceptions are so termed but respectively, the very same conception, taken in various references, may be at once a superior and an inferior one. The conception of man, for instance, is, in respect to the conception of centaur, a superior, but, in respect to that of animal, an inferior one.

10.

Kind (genus) and Sort (species).

A superior conception is, relatively to its inferior, named genus; an inferior, relatively to its superior, species.

Generic and special conceptions are, like superior and inferior ones, distinguished, not as to their nature, but with regard to their relation to one another (*termine à quo*, or *ad quod*) in the logical subordination.

11.

Highest Genus and lowest Species.

That genus, which is not a species, is the highest (*genus summum non est species*); and that species, which is not a genus, is the lowest (*species, quæ non est genus, est infima*).

According to the law of continuity, however, there can be neither a lowest, nor a proxime species.

Scho. If we conceive of a series of several conceptions subordinated to one another, for example, iron, metal, body, substance, thing, we may obtain higher and higher genera; for every species is always to be considered as a genus with regard to its inferior conception, for instance, the conception of a man of learning with regard to that of a philosopher, till we at last arrive at a genus that cannot be a species again. And one of that sort we must finally reach; because there must at last be a higher conception, from which, as such, nothing can be farther abstracted without the whole conception's vanishing. But in the whole series of species and of genera there is no such thing as a lowest conception or a lowest species, under which no other conception or species is contained; because one of that sort could not possibly be determined. For, if we have a conception, which we apply immediately to individuals, specific distinctions, either which we do not notice, or to which we pay no attention, may exist with respect to it. There are no lowest conceptions but comparatively for use, which have obtained this signification, as it were, by convention, provided that we are agreed not to go deeper in a certain matter.

Relatively to the determination of the special and of the generic conceptions, then, this universal law—There is a genus that cannot be any more a species; but there are no species but what may become genera again—holds good.

12.

Larger and stricter Conceptions. Alternate Conceptions.

A superior conception is also named a larger; an inferior, a stricter or narrower.

Conceptions, which have the same sphere, are distinguished by the name of alternate ones.

13.

Relation of the inferior to the superior, of the larger to the stricter, Conceptions.

The inferior conception is not contained in the superior; for it contains more in itself than the superior; but is contained under it; because the superior contains the ground of cognition of the inferior.

Again, the one cognition is larger than the other, not because it contains more under it—for we cannot know that—but because it contains under it the other conception and still more than it.

14.

Universal Rules relative to the Subordination of Conceptions.

With regard to the logical sphere of conceptions the following rules hold:

1, What agrees with or is repugnant to the superior conceptions, likewise agrees with or is repugnant to all the inferior ones, which are contained under those; and,

2, conversely, What agrees with or is repugnant to all inferior conceptions, likewise agrees with or is repugnant to their superior ones.

Scho. Because that, in which things agree, flows from their universal properties, and that, in which they are different, from their particular ones, we cannot conclude that, What agrees with or is repugnant to an inferior conception, likewise agrees with or is repugnant to other inferior conceptions, which belong with it to a superior one. *Exempli gratia*, we cannot conclude, that that, which does not agree with man, does not with angels neither.

15.

Conditions of the Origin of superior and of inferior Conceptions: logical Abstraction and Determination.

By continued logical abstraction higher and higher conceptions arise; and, on the other hand, by continued logical determination lower and lower ones. The greatest possible abstraction yields the highest or the most abstract conception—that one, from which no farther determination can be thought of as away. The highest finished determination would yield a thoroughly determined conception *(conceptum omnimode determinatum)*, that is, a conception, to which no farther determination can be conceived to be added.

Scho. As single things only or individuals are thoroughly determined, cognitions as intuitions only, but not as conceptions, can be thoroughly determined; in regard to the latter the logical determination never can be considered as finished (§ 11. N).

16.

Use of Conceptions in the Abstract and in the Concrete.

Every conception may be used both universally and particularly (*in abstracto* and *in concreto*). The inferior conception is used in the abstract relatively to its superior; the superior, in the concrete relatively to its inferior.

Scho. 1. The words, abstract and concrete, refer not so much to the conceptions in themselves (for every conception is an abstract one), as to their use. And this may again have different degrees, accordingly as a conception is treated, now more, then less, abstractedly or concretely, *id est,* accordingly as sometimes more, sometimes fewer, determinations are either omitted, or superadded. By the abstract use a conception comes nearer the highest genus, by the concrete, on the other hand, nearer the individual.

2. Which use of conceptions, the abstract or the concrete, is the preferable?—Nothing can be decided on this point. The value of the one is not to be estimated less, than that of the other. By very abstract conceptions we cognise in many things little; by very concrete ones, in few things much; consequently what we gain on the one side we lose on the other. A conception, which has a great

sphere, is so very useful, as it can be applied to many things; but then there is the less contained in it. In the conception of substance, for instance, we do not conceive of so much, as in that of chalk.

3. The art of popularity consists in hitting the relation between the representation in the abstract and that in the concrete in the same cognition; therefore between the conceptions and their exhibition, whereby the maximum of cognition, with regard as well to the sphere as to the matter is attained.

GENERAL DOCTRINE OF ELEMENTS.

SECTION THE FIRST.

Judgments.

17.

Explication of a Judgment in General.

A JUDGMENT is the representation of the unity of the consciousnes of various representations or the representation of their relation provided that they make up a conception.

18.

Matter and Form of Judgments.

Matter and form pertain to every judgment as its very constituents. The matter consists in the cognitions, which are given and conjoined in the unity of consciousness in the judgment; the form of the judgment, in the determination of the way in which the various representations, as such, belong to one consciousness.

19.

Object of logical Reflection—the mere Form of Judgments.

As logic abstracts from every real or objective distinction of cognition, it can occupy itself as little about the matter of judgments, as about that of conceptions. It consequently has to consider merely the distinction of judgments with regard to their bare form.

20.

Logical Forms of Judgments: Quantity, Quality, Relation, and Modality.[*]

The distinctions of Judgments with respect to their form may be reduced to the four main points of quantity, of quality, of relation, and of modality, with regard to which just as many various sorts of judgments are determined.

21.

Quantity of Judgments: Universal, particular,[†] *single.*

As to quantity, judgments are either universal, or particular, or single; accordingly as the subject in the judgment is either quite included in the notion of the predicate, or excluded from it, or but in part included in it, in part excluded from it. In the universal judgment the sphere of one conception is comprehended quite within that of another; in the particular a part of one conception is comprehended under the sphere of another; and in the single a conception, which has no sphere at all, is consequently comprehended merely as a part under the sphere of another conception.

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[*] Relatively to the distinction of judgments as to their mere form the following questions occur: How many representations are compared with the unity? Are they exhibited as conjoined or not? What sort of conjunction is it? With what degree of holding-true is this conjunction conceived of? The two first regard the internal properties of judgments, the two last the relations to one another, and of the judgments to the cognitive faculty. T.

[†] Our author would rather have these judgments, when used, in metaphysic, termed Plurative. See his reasoning on this subject in the 20th paragraph of his PROLEGOMENA turned by the Translator.

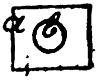
Scholion 1. Single judgments, as to the form, are to be esteemed in the use equal to universal; for in both the predicate holds with regard to the subject without exception. For example, in the single proposition, Caius is mortal, an exception can have place just as little, as in the universal one, All men are mortal. For there is but one Caius.

2. With respect to the universality of a cognition, a real distinction between general and universal propositions has place, but which does not concern logic. General propositions are those which contain something of the universal of certain objects and therefore not sufficient conditions of the subsumption, for instance, the proposition, Proofs must be made in a solid manner; universal propositions are such, as maintain something of an object universally.

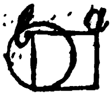
3. Universal rules are either analytically, or synthetically universal. Those abstract from the distinctions; these attend to them and of course determine with regard to them. The more simple an object is cogitated, the sooner analytical universality in consequence of a conception is possible.

4. When universal propositions, without knowing them in the concrete, cannot be perspected in their universality, they cannot serve for a rule, and consequently cannot hold heuristically in the application, but are only problems for the universal grounds of that which is first known in particular cases. For example, the proposition, Whoever has no interest in lying and knows the truth, speaks truth; this proposition is not to be perspected in its universality; because we cannot know the limitation to the condition of the disinterested person but by experience; namely, that men can lie from interested motives; which lying proceeds from their not adhering firmly to morality. An observation that teaches us to know the frailty of human nature.

5. Of particular judgments it is to be noticed that, if they shall be capable of being perspected by reason, and therefore have a rational, not merely an intellectual (abstracted) form, the subject must be a larger *(latior)* conception, than the predicate. Let the predicate be always = ○, the subject □, thus:



it is a particular judgment; for something belonging to a is b, something not b—that flows from reason—But let it be thus:



every a, at least when it is less than b, but not when greater, can be contained under b; by consequence it is but fortuitously particular.

22.

Quality of Judgments: Affirmative, negative, indefinite.

As to quality, judgments are either affirmative, or negative, or indefinite. In an affirmative or positive one the subject is thought of under the sphere of a predicate; it, in a negative, is placed without the sphere; and, in an indefinite, put within the sphere of a conception, which lies without the sphere of another conception.

Scho. 1. The indefinite judgment shews not only that a subject is not contained under the sphere of a predicate, but that it lies without its sphere somewhere in the indefinite sphere; this judgment therefore represents the sphere of the predicate as limited.

Every possible thing is either A, or not A. If we say, Something is not A, *exempli gratia*, The human soul is not mortal. Some men are not litterati. This is an indefinite judgment. For by it it is determined beyond the definite sphere of A not to what conception the object belongs, but that it belongs to the sphere without A, which is, properly speaking, not a sphere at all, but the bordering of a sphere on the indefinite or bounding itself.

Though the exclusion is a negation, the limitation of a conception is a positive operation. Hence are bounds positive conceptions of limited objects.

2. According to the principle of the exclusion of every third (*exclusi tertii*) the sphere of one conception is, relatively to another, either exclusive, or inclusive. But, as logic has to do merely with the form of the judgment, not with the conceptions as to their matter, the distinction of the indefinite from the negative judgments does not appertain to this science.

3. In negative judgments the negation always affects the copula; in indefinite, not the copula, but the predicate is affected by it; which circumstance is expressed the best in Latin.

23.

Relation of Judgments: Categorical, hypothetical, disjunctive.

As to relation, judgments are either categorical, or hypothetical, or disjunctive. The given representations in a judgment are subordinated to one another in the unity of consciousness either as the predicate to the subject, or as the consequent to the antecedent, or as a member of the division to the divided conception. By the first relation categorical judgments are determined, by the second hypothetical, and by the third disjunctive.

24.

Categorical Judgments.

In these the subject and the predicate make up their matter; the form, by which the relation (of agreement or of disagreement) between the subject and the predicate is determined and expressed, is termed the copula.

Scho. Categorical judgments make up the matter of other judgments; but from this we must not think, as several logicians do, that both hypothetical and disjunctive judgments are nothing more than different dresses of categorical ones, and can therefore be all reduced to them. All the three judgments depend upon essentially distinct logical functions of the understanding, and consequently must be discussed according to their specific distinction.

25.

Hypothetical Judgments.

The matter of these consists of two judgments, which are connected together as antecedent and consequent. The one of these judgments, which contains the ground, is the antecedent *(prius)*; the other, which stands in the relation of consequence to that, the consequent *(posterius)*; and the representation of this sort of connexion of both judgments together forming the unity of consciousness is named the consequence, which makes up the form of hypothetical judgments.

Scho. I. What the copula is to categorical judgments, the consequence is to hypothetical ones, their form.

2. Some think it easy to transform a hypothetical proposition to a categorical. But it is not practicable; because they are quite distinct by their very nature. In categorical judgments nothing is problematical, but every thing assertive; whereas in hypothetical ones, the consequence only is assertive or positive. In the latter we may therefore connect two false judgments together; for in this case the whole affair is the rightness in the connexion—the form of the consequence; upon which the logical truth of these judgments depends. There is an essential distinction between these two propositions: All bodies are divisible, and, If all bodies are composed, they are divisible. In the former the thing is maintained directly; it in the latter is maintained on a problematically expressed condition only.

26.

Modes of Connexion in hypothetical Judgments: Modus ponens and Modus tollens.

The form of connexion in hypothetical judgments is twofold: the laying down (*modus ponens*) and the annulling (*modus tollens*).

1. When the antecedent or ground is true, the consequent determined by it is likewise true. This is denominated the *modus ponens*;

2. When the consequent is false, the antecedent or ground is likewise false; the *modus tollens*.

27.

Disjunctive Judgments.

A judgment, when the parts of the sphere of a given conception determine one another in the whole or to a whole as complements, is disjunctive.

28.

Matter and Form of disjunctive Judgments.

The several given judgments, of which the disjunctive judgment is composed, constitute its matter, and are named the members of disjunction or opposition. In the disjunction itself, that is, in the determination of the relation of the various judgments, as members of the whole sphere of the divided cognition excluding one another, the form of these judgments consists.

Scho. All disjunctive judgments then represent various judgments as in the commerce of a sphere and do not produce any judgment but by the limitation of the other with regard to the whole sphere; they consequently determine the relation of every judgment to the whole sphere, and thereby the relation, which these members of disjunction have to one another. Not one member in this judgment therefore determines another but with a proviso, that all the members are in commerce as parts of a whole sphere of cognition, without which nothing in a certain reference can be thought of.

29.

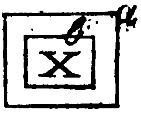
Peculiar Character of disjunctive Judgments.

The peculiar character of all disjunctive judgments, whereby their specific distinction, as to the point of relation, from the others, in particular from the categorical ones, is determined, consists in this, that all the members of disjunction are problematical judgments, of which nothing else is thought, than that they, as parts of the sphere of a cognition, each the complement of the other to the whole (*complementum ad totum*), taken together, are equal to that sphere. And hence it follows, that the truth must be contained in one of these problematical judgments or (what amounts to the same thing) that one of them must hold assertively; because besides them the sphere of cognition comprehends nothing more on the given conditions and the one is opposed to the other; by consequence they only, and but one of them, can be true.

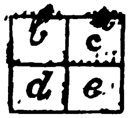
Scho. In a categorical judgment the thing, whose representation is considered as a part of the sphere of another subordinate representation, is considered as contained under this its superior conception; consequently in the subordination of the spheres here the part of the part is compared with the whole. But in disjunctive judgments we go from the whole to all the parts taken together. What is contained under the sphere of a conception, is likewise contained under any one of the parts of this sphere. Accordingly the sphere must be first divided. When we, for instance, form the disjunctive judgment, 'a learned man is either a mere historian, or a philosopher, or a mathematician,' we determine by it, that these conceptions, as to the sphere, are parts of the sphere of the learned, but by no means parts of one another, and that they, collectively taken, are complete.

That in disjunctive judgments, not the sphere of the divided conception, as contained in the sphere of the divisions, but that which is contained under the divided conception, as contained under one of the members of division, is considered, the following scheme of the comparison between categorical and disjunctive judgments may render the matter more intuitive:

In categorical judgments, x is what is contained under b, and likewise under a;



In disjunctive ones x, contained under a, is contained under either b, or c, and so on;



The division in disjunctive judgments therefore shews not the co-ordination of the parts of the whole conception, but all the parts of its sphere. In these judgments we cogitate many things by one conception; in those, one thing by many conceptions, for example, the definite by all the marks of co-ordination.

30.

Modality of Judgments: Problematical, assertive, apodictical.

As to modality, by which point the relation of the whole judgment to the cognitive faculty is determined, judgments are either problematical, or assertive, or apodictical. The problematical ones are accompanied with the consciousness of the mere possibility, the assertive with that of the reality, and the apodictical with that of the necessity of judging.

Scho. I. The modality consequently shews the way only, in which something is maintained or denied in a judgment: whether nothing is made out with regard to the truth or the untruth of a judgment, as in the problematical judgment, The soul may be immortal; or whether something is determined with regard to it, as in the assertive judgment, The soul is immortal; or whether the truth of a judgment is expressed with the dignity of necessity, as in the apodictical judgment, The soul must be immortal. This determination of the merely possible or actual or necessary truth consequently concerns the judgment itself only, by no means the thing, which is judged of.

2. In problematical judgments, which may be said to be those, whose matter is given with the possible relation between the predicate and the subject, the subject must always have a smaller sphere, than the predicate.

3. Upon the distinction between probable and assertive judgments the true distinction between judgments and propositions depends, which distinction, with regard to those, was formerly made falsely in the mere expression by words, without which we could not judge at all. In a judgment the relation of various representations to the unity of consciousness is conceived of merely as problematical; in a proposition, on the other hand, as assertive. A problematical proposition is a contradiction *in adjecto* Ere we have a proposition, we must judge; and we judge of much that we cannot make out, but which we must do the moment we determine a judgment as a proposition. It is however good to judge problematically before we assume the judgment as assertive, in order to prove

it in this way. And it is not always necessary to our purpose to have assertive judgments.

31.

Expoundable Propositions.

Propositions, in which both an affirmation and a negation are comprised, but in an occult manner, so that the affirmation is made distinctly, but the negation cryptically, are expoundable.

Scho. In the expoundable proposition (for instance), Few men are learned, there lies, 1, but in a hidden manner, the negative judgment, Many men are not learned; and, 2, the affirmative one, Some men are learned. As the nature of expoundable propositions depends entirely upon conditions of language, on which we can express laconically two judgments at once, the remark, that there may be in our language judgments, which must be expounded, belongs to grammar, not to logic.

32.

Theoretical and practical Propositions.

Theoretical propositions are those, which refer to an object and determine what belongs or does not belong to it; practical ones, again, those, which express the action, whereby, as the necessary condition of an object, this object is possible.

Scho. Logic has to handle practical propositions as to the form only, which in this respect are opposed to the theoretical ones. Practical propositions as to the matter, and in this view distinct from speculative ones, belong to moral philosophy.

33.

Indemonstrable and Demonstrable Propositions.

Demonstrable or evincible propositions are those capable of proof; those not so are named indemonstrable.

Immediately certain judgments are indemonstrable, and therefore to be considered as elemental propositions.

34.

Principles.

Immediately certain judgments *à priori* may be termed fundamental propositions or positions, provided that other judgments can be evinced by them, but they themselves cannot be subordinated to any other judgment. They on that account are denominated principles (beginnings).

35.

Intuitive and Discursive Principles: Axioms and Acroams.

Principles are either intuitive, or discursive. The former may of course be exhibited by intuition, or immediate representation, and are named axioms; the latter cannot be expressed but by conceptions, and may be distinguished by the appellation of acroams.

36.

Analytic and Synthetic Propositions.

Those propositions, whose certainty depends upon the identity of the conceptions (of the predicate with the notion of the subject), are analytical. Those, whose certainty is not founded in that identity, must be named synthetical.

Scho. I. To every x, to which the conception of body (a + b) belongs, extension (b) also belongs; is an example of an analytic proposition.

To every x, to which the conception of body (a + b) belongs, attraction (c) too belongs; is an example of a synthetic one. The synthetic propositions increase the cognition *materialiter*; the analytic ones, merely *formaliter*. Those comprehend determinations; these, nothing but logical predicates.

2, Analytic principles, being discursive, are not axioms. Nor are synthetic ones neither, but when intuitive.

37.

Tautological Propositions.

The identity of the conceptions in analytic judgments may be either an explicit or an implicit one.

In the former case the analytic propositions are tautological.

Scho 1. Tautological propositions are virtually empty, or void of consequence; for they are of no use whatever. Such is, for instance, the tautological proposition, A man is a man. For if we can say nothing more of a man, than that he is a man, we know nothing more of him at all.*

Whereas implicitly identical propositions are not void of consequence or useless; for they render the predicate, which lies infolded (*implicite*) in the conception of the subject, clear by development (*explicatio*).

2. Propositions void of consequence must be distinguished from those void of sense, which are so because they regard the determination of what is commonly named occult qualities.

38.

Postulate and Problem.

A postulate is a practical immediately certain proposition, or a principle, which determines a possible action, whereby it is presupposed, that the way of performing it is immediately certain.

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* Some modern German philosophasters have had the assurance to lay down the tautological proposition, 'I am I,' as a principle, from which all science and all human knowledge must be derived. T.

Problems are demonstrable propositions that require a direction or a rule for their solution, or those that express an action, whose way of being performed is not immediately certain.

Scho. 1. There may be theoretical postulates too for the behoof of practical reason. Such as those of the existence of God, of moral liberty, and of a future world, which are theoretical hypotheses necessary in a practical view.

2. To a problem there belong, 1, the question, which contains what is to be performed, 2, the resolution, which comprises the manner, in which what is be performed can be done, and, 3, the demonstration, that, when we shall have proceeded in such a manner, what is required will be performed.

39.

Theorems, Corollaries, Lemmas, and Scholia.

Theorems are theoretical propositions capable and standing in need of a proof; Corollaries and consectaries, immediate consequences of a preceding proposition; Lemmas, propositions not native in the science, in which they are presupposed as evinced, but taken from other sciences; Scholia, mere illustrative propositions, which consequently do not belong as members to the whole of the system.

Scho. The thesis and the demonstration are essential and universal points of every theorem. The distinction between theorems and corollaries may besides be placed in this, that these are immediately concluded, but those drawn from immediately certain propositions by a series of consequences.

40.

Judgments of Perception and Experience.

A judgment of perception is merely subjective; an objective judgment from perceptions is a judgment of experience.

Scho. A judgment from mere perceptions is hardly possible but by one's representation's being expressed as a perception. In perceiving a steeple, we perceive the red colour on it; but cannot say, it is red. For this were not only an empirical judgment, but a judgment of experience, that is, an empirical judgment, by which we obtain a conception of the object. For example, In touching a stone we feel warmth; is a judgment of perception; the stone is warm, on the other hand, a judgment of experience. In the latter, what is merely in the subject must not be considered as belonging to the object; for a judgment of experience is the perception, whence the conception of the object arises, for instance, Whether luminous points move in the moon, or in the atmosphere, or in the eye of the beholder.

General Doctrine of Elements.

SECTION THE THIRD.

Syllogisms.

41.

Syllogism in general.

By syllogising we understand that function of thinking, by which one judgment is derived from another. A syllogism (or an argumentation) in general is consequently the deduction of one judgment from another.

42.

Immediate and Mediate Syllogisms.

All syllogisms are either immediate, or mediate. An immediate syllogism *(consequentia immediata)* is the deduction of one judgment from another without an intermedial judgment. A syllogism, when, besides the conception, which a judgment contains, other conceptions are used for the purpose of deriving a cognition from them, is mediate.

43.

Syllogisms of the Understanding, of Reason, and of Judgment.

Immediate syllogisms are stiled syllogisms of the understanding too; whereas all mediate ones are those either of reason, or of judgment. We shall here treat of the immediate ones first.

I. Syllogisms of the Understanding.

44.

Peculiar Nature of the Syllogisms of the Understanding.

The essential character of all immediate syllogisms and the principle of their possibility consist entirely in an alteration of the mere form of the judgments: while the matter of the judgments (the subject and the predicate) remains invariably the same.

Scholium I. By the form only and by no means by the matter of the judgments' being altered in the immediate syllogisms, these syllogisms are distinguished from all mediate ones, in which the judgments are distinct as to the matter too; because a new conception as an intermedial judgment, or as a middle term, must survene in order to infer the one judgment from the other. When, for example, we argue, All men are mortal; therefore Caius is mortal. This is not an immediate syllogism. For we, for the inference, stand in need of the intermedial judgment, Caius is a man; but by this new conception the matter of the judgments is altered.

2. An intermedial judgment, it is true, may be thrown in the syllogisms of the understanding too; but then it is merely tautological. As, for instance, in the immediate syllogism: All men are mortal; some men are men; therefore some men are mortal. The middle term is a tautological proposition.

45.

Moods of the Syllogisms of the Understanding.

The syllogisms of the understanding go through all the classes of the logical functions of judging, and are consequently determined in their principal moods or forms by the points of quantity, of quality, of relation, and of modality. Upon that the following division of these syllogisms depends:

46.

I. *Syllogisms of the Understanding (with regard to the Quantity of Judgments) per Judicia subalternata.*

In these syllogisms of the understanding both the judgments are distinct as to quantity, and the particular judgment is deduced from the universal agreeably to the principle: The inference of the particular from the universal holds (*ab universali ad particulare valet consequentia*).

Scho. A judgment, when it is contained under another, is termed subaltern; as, for example, particular judgments under universal ones (Every man is fallible; some man is fallible.—No man is infallible; some man is not infallible. T.).

47.

2. *Syllogisms of the Understanding (with regard to the Quality of Judgments) per Judicia opposita.*

In syllogisms of the understanding of this form the alteration regards the quality of the judgments considered with respect to opposition. As this opposition may be a threefold one, it yields the particular division of the immediate syllogising by contradictorily opposed judgments, by contrary, and by subcontrary ones.

Scho. Syllogisms of the understanding by equipollent judgments cannot in strict propriety be named syllogisms; for no consequence has place in them; they are rather to be considered as a mere substitution of the words, which denote the very same conception, by which means the judgments themselves remain unaltered even as to the form. Not all men are virtuous, for instance, and, Some men are not virtuous. Both judgments express the very same thing.

48.

a. *Syllogisms of the Understanding per Judicia contradictorie opposita.*

In syllogisms of the understanding by judgments which are contradictorily opposed to one another, and, as such, constitute the genuine pure opposition, the truth of the one of the contradictory judgments is inferred from the falsity of the other, and conversely. For the genuine opposition, which has place in these syllogisms, contains neither more, nor less, than what belongs to opposition. Agreeably to the principle of the exclusive third both repugnant judgments cannot be true; but they can just as little be both false. When therefore the one is true, the other is false, and conversely (All logic is the same repetition; some logic is not the same repetition. T.).

49.

b. *Syllogisms of the Understanding per Judicia contrarie opposita.*

Contrarily opposed judgments are those, the one of which is universally affirmative, the other universally negative. As the one of them expresses more, than the other, and as in what it expresses more, than the mere negation of the other, the falsity may lie, they never can be both true, but may be both false. With regard to these contrary judgments then, the inference of the falsity of the one from the truth of the other holds; but not conversely (Every enlightened man is divested of prejudices; no enlightened man is divested of prejudices. T.).

50.

c. *Syllogisms of the Understanding per Judicia subcontrarie opposita.*

Subcontrarily opposed judgments are judgments, the one of which affirms or denies particularly what the other denies or affirms particularly.

As they may be both true, but cannot be both false, only the following conclusion holds with regard to them: When the one of these propositions is false, the other is true; but not conversely.

Scho. In the subcontrary judgments no pure strict opposition obtains; for it is not denied or affirmed of the same objects in the one what is affirmed or denied of the other. *Exempli gratia,* in the syllogism: Some men are learned; therefore some men are not learned—that, which is denied in the latter judgment, is not maintained of the same men in the former.

51.

3. *Syllogisms of the Understanding (with regard to the Relation of Judgments) per Judicia conversa, sive per Conversionem.*

Immediate syllogisms by conversion regard the relation of judgments and consist in the transposition of the subject and of the predicate in both judgments; so that the subject of the one judgment is made the predicate of the other, and conversely (thus, No virtue is vice; no vice is virtue. T.).

52.

Pure and Altered Conversion.

In conversion either the quantity of the judgments is altered, or it remains unaltered. In the former case the converted (*conversum*) is as to quantity distinct from the converting (*convertente*), and the conversion is termed an altered one (*conversio per accidens*); in the latter case the conversion is named a pure one (*conversio simpliciter talis*) (Take this example, Every A is B; some B is A. No A is B; some B is not A—Every A is B; every B is A. Some A is not B; some B is not A. T.).

53.

Universal Rules of Conversion.

Relatively to the syllogisms of the understanding by conversion the following rules hold:

1. Universally affirmative judgments cannot be converted but *per accidens;* for in them the predicate is a larger conception, and consequently some of it only is contained in the conception of the subject.

2. But all universally negative judgments may be *simpliciter* converted; for in them the subject is taken out of the sphere of the predicate. Just so are,

3. All particularly affirmative propositions *simpliciter* convertible; for in these judgments a part of the sphere of the subject is subsumpted under the predicate, by consequence a part of the sphere of the predicate may be subsumpted under the subject.

Scho. 1. In universally affirmative judgments the subject, as it is contained under the sphere of the predicate, is considered as a *contentum* of the predicate. We therefore cannot argue, for instance, but thus, All men are mortal; consequently some of those contained under the conception of mortal are men. But the reason of universally negative judgments' being *simpliciter* convertible is, that two conceptions universally repugnant to one another, repugn one another in the same sphere.

2. Several universally assertive judgments may be simply converted. But the ground of that lies not in their form, but in the peculiar quality of their matter; for example, the judgments: All that which is immutable is necessary, and All that which is necessary is immutable.

54.

4. *Syllogisms of the Understanding (with regard to the Modality of Judgments) per Judicia contraposita.*

The form of the immediate syllogism by contraposition consists in that metathesis of the judgments, by which the quantity remains the same, but the quality is altered. These syllogisms, by their turning an assertive judgment to an apodictical one, regard nothing but the modality of judgments.

55.

Universal Rule of Contraposition.

With regard to contraposition the following universal rule holds:

All universally affirmative judgments may be simply contraposed. For, when the predicate, as that which contains the subject under it, consequently the whole sphere, is denied, a part of it, that is, the subject, must likewise be so (Every A is B, may be thus contraposed, I, Every non B is non A; 2, No non B is A. T.).

(Scho I. The metathesis of judgments by conversion and that by contraposition then are so far opposed to one another, as that alters the quantity only, this nothing but the quality. T.).

(2. These forms of immediate syllogisms refer merely to categorical judgments. T.).*

II. Syllogisms of Reason.

56.

Syllogism of Reason in General.

A syllogism of reason is the knowledge of the necessity of a proposition by the subsumption of its condition under a given universal rule.

57.

Universal Principle of all Syllogisms of Reason.

The universal principle, upon which the validity of all syllogising by reason depends, may be determinately expressed in this formula :

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* While we have the alteration of the bare form of the judgments in these syllogisms in view, and while their matter remains the same, no other affinity of two hypothetical judgments, than what consists in changing the hypothesis and the thesis, is cogitable. For instance, If there is fire, there is smoke; and if there is smoke, there is fire. But there can be no affinity between a disjunctive and another judgment. In disjunctive judgments there is neither quantity nor quality to be considered. As the relation, which they bear one another, is that of two conceptions, the objective validity of the one of which excludes that of the other, it allows of no logical distinction. T.

What ranks under a condition of a rule, ranks under the rule itself.

Scho. The syllogism of reason premises a universal rule and a subsumption under its condition. We thereby cognise the conclusion *à priori* not in the single, but as comprehended in the universal and as necessary on a certain condition. And this, that every thing ranks under the universal and is determinable by universal rules, is the very principle of rationality or of necessity.

58.

Constituents of a Syllogism of Reason.

To every syllogism of reason the following three essential parts belong:

I, a universal rule, which is named the major proposition;

2, the proposition, by which a cognition is subsumpted under the condition of the universal rule, and which is denominated the minor proposition (and sometimes the assumption); and,

3, the proposition, which either affirms or denies the predicate of the rule of the subsumpted cognition, is named the conclusion (or inference or illation).

The two first propositions conjoined are termed the premises.

(For instance, Every thing composed is mutable (major); bodies are composed (minor); *ergo* bodies are mutable (conclusion). T).

Scho. A rule is an assertion or a universal condition. The relation of the condition to the assertion, that is to say, how this ranks under that, is the exponent of the rule.

By the subsumption we mean, the knowledge that the condition has place (somewhere).

The consequence is, the conjunction of that which has been subsumpted under the condition with the assertion of the rule.

59.

Matter and Form of Syllogisms of Reason.

The matter of syllogisms of reason consists in the premises; the form, in the conclusion, provided that it comprises the consequence.

Scho. I. In every syllogism of reason then the truth of the premises must be first proved, and then the rightness of the consequence. In the repudiation of a syllogism of reason never the conclusion, but either the premises, or the consequence, must always be the first rejected.

2. In every syllogism of reason the conclusion is given the moment the premises and the consequence are.

60.

Division of the Syllogisms of Reason (as to Relation) into categorical, hypothetical, and disjunctive.

All rules (judgments) contain objective unity of the consciousness of the multifarious of cognition; consequently a condition, on which one cognition belongs with another to one consciousness. Only three conditions of this unity are cogitable either as the subject of the inherence of the marks, or as the ground of the dependence of one cognition upon another, or as the conjunction of the parts in a whole (logical division.) There can therefore be but just as many sorts of universal rules *(propositiones majores)*, by which the consequence of one judgment from another is obtained. And in that the division of all syllogisms of reason into categorical, hypothetical, and disjunctive, is founded.

Scho. I. The syllogisms of reason can be divided neither as to quantity—for every major is a rule, by consequence something universal—nor as to quality—for it is equipollent whether the conclusion is affirmative or negative—nor as to modality—for the conclusion is always accompanied with the consciousness of necessity, and of course has the dignity of an apodictical proposition. Nothing therefore but the relation, as the only possible ground of division *(fundamentum divisionis)* of the syllogisms of reason, remains.

2. Many logicians hold the categorical syllogisms of reason only ordinary; and all the others extraordinary. But it is without foundation and false. For all these three species are productions of equally right functions of reason, and which functions are alike essentially distinguished from one another.

61.

Proper Distinction between categorical, hypothetical, and disjunctive Syllogisms of Reason.

That which is distinctive in these three species of syllogism* lies in the major proposition. In categorical syllogisms the major is a categorical proposition; in hypothetical ones, a hypothetical or problematical one; and in disjunctive, a disjunctive.

62.

Categorical Syllogisms of Reason.

In every categorical syllogism there are three principal conceptions (*termini*):

1, the predicate in the conclusion; which conception is denominated the major term; because it has a greater sphere than the subject;

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* Whenever Syllogism is simply mentioned, we always understand by it a syllogism of reason or a ratiocination. T.

2, the (subject) in the conclusion, whose conception is named the minor term; and,

3, an intermedial mark, which receives the appellation of the middle term (and sometimes of the argument); because by it a cognition is subsumpted under the condition of the rule.

Scho. I. This distinction of the terms has not place but in categorical syllogisms; because they only conclude by means of a middle term; in the others, but by the subsumption of a proposition represented problematically in the major and assertively in the minor.

(2. The three propositions are stiled the proxime matter; the three terms, the remote; and the major and the minor, the extremes. T.).

63.

Principle of categorical Syllogisms of Reason.

The principle, upon which both the possibility and the validity of all categorical syllogisms depend, is this:

What agrees with the mark of a thing, agrees with the thing itself; and what is repugnant to the mark of a thing, is repugnant to the thing itself *(nota notæ est nota rei ipsius; repugnans notæ, repugnat rei ipsi)*.

Scho. From the principle just laid down the *Dictum de omni et nullo* may be easily deduced, and it can therefore hold as the first principle neither for syllogisms of reason, nor for categorical ones in particular.

The generic and the special conceptions are universal marks of all the things that rank under them. Consequently the rule, What agrees or is repugnant to the genus or the species, agrees or is repugnant to all the objects that are contained under the genus or the species, holds. And this rule is the very *Dictum de omni et nullo.*

64.

Rules for the Categorical Syllogisms of Reason.

From the nature and the principle of categorical syllogisms the following rules for them flow;

1. In every categorical syllogism neither more, nor fewer terms, than three, can be contained; for in it we must conjoin two conceptions (the subject and the predicate) by an intermedial mark.

2. The premises must not be all negative (*ex puris negativis nihil sequitur*); for the subsumption in the minor proposition, as it expresses, that a cognition ranks under the condition of the rule, must be affirmative.

2. Nor must all the premises be particular propositions neither (*ex puris particularibus nihil sequitur*); else there were no rule, that is, no universal proposition, whence a particular cognition could be inferred.

4. The conclusion always follows the weaker

part of the premises, that is, the negative and the particular proposition in the premises, as it is named the weaker part of the categorical syllogism *(conclusio sequitur partem debiliorem)*.

Hence if,

5, one of the premises is a negative proposition, the conclusion must likewise be negative; and,

6, if one of the premises is a particular proposition, the conclusion also must be particular;

7, In all categorical syllogisms the major must be a universal, the minor a particular, proposition; and hence it follows:

8, and finally, that the conclusion must relatively to quality follow the major, but, relatively to quantity, the minor proposition.

Scho. That the conclusion must always follow the negative and the particular proposition in the premises, is easy to be perspected.

If we make the minor proposition particular and say, Some is contained under the rule; we can say in the conclusion nothing but that the predicate of the rule agrees with some; because we have not subsumpted any more under the rule. And when we have a negative proposition for the rule (the major), we must make the conclusion too negative. For, when the major proposition says, Of all that which ranks under the condition of the rule some one predicate must be denied; the conclusion must likewise deny the predicate of that (the subject), which has been subsumpted under the condition of the rule.

65.

Pure and impure categorical Syllogisms of Reason.

A categorical syllogism is pure or simple when in it neither an immediate consequence is intermixed, nor the legitimate order of the premises altered, (for instance, Those, who are guilty of pious frauds, cannot be acceptable to God; therefore hypocrites cannot be acceptable to him; otherwise it is termed an impure or a complex one (*ratiocinium impurum, s. hybridum*).

66.

Impure Syllogisms of Reason by the Metathesis of the Propositions. Figures.

Those syllogisms which arise from the transposition of the propositions and in which therefore the order of these is not the legitimate one, are to be considered as impure. This case occurs in what is commonly named the three last figures of the categorical ratiocinations.

67.

Four Figures of Syllogisms.

By figures those four modes of syllogising, whose distinction is determined by the particular disposition of the premises and of their conceptions, are to understood.

68.

Determinative of their Distinction by the various Disposition of the middle Term.

The middle term, upon whose disposition the great stress of the business depends, may occupy either 1, in the major proposition the place of the subject and in the minor that of the predicate; or 2, in both the premises the place of the predicate; or 3, in both the place of the subject; or 4, and finally, in the major proposition the place of the predicate and in the minor that of the subject. By these four cases the distinction of the four figures is determined. Let S denote the subject of the conclusion, P its predicate, and M. the middle term; the scheme of these four figures may be thus erected:

M P	P M	M P	P M
S M	S M	M S	M S
S P	S P	S P	S P

69.

Rule for the first, as the only legitimate, Figure.

The rule of the first figure is, That the major be a universal, the minor an affirmative proposition.

And, as that must be the universal rule of all categorical syllogisms in general, it is obvious, that the first figure is the only legitimate one, which forms the basis of all the others, and to which they, if they shall have validity, must be reduced by the metathesis of the premises.

Scho. The first figure may have a conclusion of every quantity and of every quality. In the other figures there are but conclusions of a certain form; some moods of them are here excluded. That shews, that these figures are not perfect, but that there are in them certain restrictions, which prevent the conclusion's being in all the moods, as in the first figure (thus, All that which is rational is a spirit; the human soul is rational; therefore the human soul is a spirit—or (take this instance of a negative syllogism) Nothing immutable can be measured by time, the duration of God is immutable; *ergo* the duration of God cannot be measured by time. T.)

70.

Condition of the Reduction of the three last Figures to the first One.

The condition of the validity of the three last figures, on which a right or legitimate mode of ratiocinating is possible in each of them, is, That the middle term obtain in the propositions a place, whence their order may arise by means of immediate consequences according to the rules of the first figure. Hence have we the following rules for the three last figures:

71.

Rule of the second Figure.

In the second figure the minor stands right, the major must therefore be converted so that it may remain universal. That however is not possible but when it (the major) is universally negative; but it, if affirmative, must be contraposed. In both cases the conclusion is negative (*sequitur partem debiliorem.*)

Scho. The rule of this figure is, That, to which the mark of a thing is repugnant, is repugnant to the thing itself. Here we must convert and say, That, to which a mark is repugnant, is repugnant to this mark; or we must convert the conclusion thus, That, to which the mark of a thing is repugnant, the thing itself is repugnant to; consequently it is repugnant to the thing (For example, Nothing perishable is simple; *of course nothing simple is perishable*; the human soul is simple; therefore the human soul is not perishable. The question here is not what is said, but what is indispensably necessary to be thought if there shall be a right consequence. The illative or conclusive capacity of the argumentation evidently consists in the simply converted member in italics, by whose insertion, however, the syllogism itself is rendered redundant. T.).

72.

Rule of the Third Figure.

In the third figure the major stands right; by consequence the minor must be converted; yet so that an affirmative proposition may result from it. This however is not possible but when the affirmative proposition is particular; consequently the conclusion is particular.

Scho. The rule of this figure is, What agrees or is repugnant to a mark, agrees or is repugnant to some things, under which this mark is contained. We must first say: agrees or is repugnant to all that which is contained under this mark (For instance, All men are sinners; all men are rational beings; *consequently some rational beings are men;* therefore some rational beings are sinners. Which reasoning is not regularly consequential but by means of the conversion *per accidens* in italics. T.).

73.

Rule of the fourth Figure.

When in this figure the major is universally negative, it may be simply converted; and in the same manner the minor as particular; consequently the conclusion is negative. Whereas the major, if it is universally affirmative, cannot be converted but *per. accidens* or contraposed; the conclusion therefore is either particular, or negative. If the conclusion is not converted either a metathesis of the premises, or a conversion of both of them, must take place.

Scho. In this figure we syllogize thus, The predicate adheres to the middle term, this to the subject (of the conclusion), consequently the subject to the predicate; which however is not the case, but its converse follows. In order to render that possible, the major must be made the minor, and *vice versa,* and the conclusion converted; because in the former alteration the minor is turned to the major term (The negative syllogism must run thus: No dunce is learned; consequently no learned man is a dunce; some learned men are pious; consequently some pious men are learned; therefore some pious men are not dunces. Affirmative syllogisms in this figure are not possible; they, when attempted to be framed, all run into the first figure, consequently are useless, and have properly been long repudiated. T.).*

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* The ancient logicians and the scholastics used their utmost endeavours to find out all the possible moods of syllogizing in these four figures, which they distinguished by strange words, whose meaning is easily gathered from these lines:

74.

Universal Result of the three last Figures.

From the adduced rules for the three last figures it is obvious,

1, that there is a universally affirmative conclusion in neither of them, and that the conclusion is either negative or particular;

2, that in each of them an immediate consequence, not explicitly shewn, but which must be implied, is intermixed; that consequently,

3, all these three last modes of syllogizing must,

Asserit A, *negat* E; *verum universaliter ambo.*
Asserit I, *negat* O; *sed particulariter ambo.*

Whoever has a mind to admire the diligent and to regret the fruitless labours of the ancients, will see the moods and the figures amply discussed in Watts's Logic and in Kame's Art of Thinking. But the former author errs when he says (page 259) that *the consonants are neglected and that the four vowels A, E, I, O, only are regarded in the artificial words.* A proof of the contrary of this assertion, however, is, that in *Cesare and Festino,* for instance, the first consonants, C and F, shew to what form of syllogism of the first figure that of the second figure is to be reduced, and consequently point out the natural order of the conceptions, in which the knowledge of the conclusion is begotten. The consonant, s, in the first syllables of both words and every where else, denotes the *simple* conversion of the judgments; the p, in *Darapti* and *Felapton* the conversion *per accidens*; the m, in *Camestres,* the metathesis. That then the doctor either seems to have ignored or, what is more probable, has but over-looked. T.

as no pure syllogism can have more than three terms, be named not pure, but impure syllogisms *(rat. hyb.)*.*

75.

2. *Hypothetical Syllogisms of Reason.*

A hypothetical ratiocination is, as above-mentioned, a syllogism that has a hypothetical proposition for its major. It therefore consists of two propositions, an antecedent and a consequent; in it we argue according to the *modus* either *ponens*, or *tollens*.

Scho. 1. Hypothetical syllogisms then have no middle term, and nothing is shewn in them but the consequence of one proposition of another. In their major the consequence of two propositions, the former of which is a premiss, the latter a conclusion, is expressed. The minor is a transformation of the problematical condition in a categorical proposition (Thus, If A is, B is; A is; therefore B is. And, If A is, B is; but B is not; *ergo* A is not. T.).

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* It is, says our author in his treatise on The false subtilty of the four syllogistic Figures, easy to discover the first occasion of this subtilty. He, who first wrote a syllogism in three lines below one another, considered it as a chess-board and tried what would be the result of the transposition of the places of the middle term, and was as much surprised when he perceived, that a rational sense was produced, as a person that discovers an anagram is. It is just as childish to be over-joyed with the one, as with the other, especially as it is forgot, that nothing new in point of distinctness, but only an indistinctness is introduced. But it is the lot of the human understanding either to be anxiously inquisitive and to fall on impertinencies, or to catch rashly at objects too great and to build castles in the air. The one half of the multitude of thinkers chuse the number 666, the other either the origin of animals and of plants, or the mysteries of Providence. The error, into which both classes fall, is, according to the difference of their heads, of a very different sort. T.

2. From the hypothetical syllogism's consisting but of two propositions, without having a middle term, it may be seen, that it is, accurately speaking, not a syllogism of reason, but rather an immediate consequence evincible from an antecedent and a consequent, as to either the matter or the form (*consequentia immediata demonstrabilis [ex antecedente et consequente] vel quoad materiam vel quoad formam).*

Every syllogism of reason must be a proof. Now the hypothetical syllogism carries in it the ground of proof only or the argument. Consequently it is clear, that it cannot be a syllogism of reason.

76.

The Principle of hypothetical Syllogisms.

The principle of the ground: *A ratione ad rationatum ;—à negatione rationati ad negationem rationis, valet consequentia,* is the principle of hypothetical syllogisms.

77.

3. *Disjunctive Syllogisms of Reason.*

In these the major is a disjunctive proposition and consequently, as such, must have members of division or disjunction.

In disjunctive syllogisms we argue either from the truth of the one member of disjunction to the falsity of the others, or from the falsity of all the members except one to the truth of this one. That is done by the *modus ponens (*or *ponendo tollentem*), this by the *modus tollens* (or *tollendo ponentem*).

Scho. 1. All the members of disjunction, one excepted, taken together, make up the contradictory opposite of this one. Consequently a dichotomy, according to which when the one of them is true the other must be false and *vice versa*, has place here (The universal form of this syllogism is, What is A, is either B, or C; A is not B; it is therefore C. T.).

2: All disjunctive ratiocinations of more than two members of disjunction then are, properly speaking, polysyllogistic. For a true distinction can be but *bimembris*, and the logical division is nothing more than *bimembris*; but the *membra subdividentia* are put among the *membra dividentia* for the sake of brevity.

78.

Principle of the disjunctive Syllogisms.

It is the principle of the exclusive third: *A negatione unius contradictorie oppositum ad affirmationem alterius;—à positione unius ad negationem alterius—valet consequentia.*

79.

Dilemma.

A dilemma (*argumentum utrinque feriens.* T.) is a hypothetically disjunctive syllogism, or a hypothetical argument, whose consequent is a disjunctive judgment. The hypothetical proposition, whose consequent is disjunctive, is the major proposition; the minor affirms, that the consequent (*per omnia membra*) is false, and the conclusion, that the antecedent is so. (*A remotione consequentis ad negationem antecedentis valet consequentia*).

Scho. (The universal form of a dilemma, trilemma, tetralemma, or how many members of division soever there may be, is this, If A is either B, or C, or D is; but neither B, nor C, nor D is; therefore A is not. T.) The ancients valued the dilemma much and named it the *syllogismus cornutus.* They knew how to put an opponent to straits by mentioning every thing that he could possibly have recourse to, and then refuted it all to him. In every opinion he adopted they pointed out many difficulties to him. But it is a sophistical artifice not to refute propositions directly, but to point out difficulties; which artifice may be used in many, nay, in most things.

If we chose immediately to declare false every thing, in which there are difficulties, it is an easy play to reject every thing. It is good to shew the impossibility of the contrary; but it is somewhat illusory when the incomprehensibility of the contrary is held its impossibility. The dilemmas therefore, though consequential, are very captious or ensnaring. They may be used not only to defend true propositions, but to impugn true ones by difficulties started against them.

80.

Formal and cryptical Syllogisms of Reason.

A syllogism of reason in due form (*ratiocinium formale*) is a syllogism which not only contains every thing requisite as to the matter, but is properly and completely expressed as to the form. The cryptical syllogisms are opposed to the formal ones. All those, in which either the premises are displaced, or one of them is omitted, or the middle term only conjoined with the conclusion, may be considered as cryptical or hidden. A syllogism of the second sort, in which one of the premises is not expressed but reserved in the mind, is a defective (an imperfect or a mutilated) one, or an enthymeme *(syllogismus truncatus).* That of the third sort, is a contracted syllogism.

(Scho. Let me give you these instances of an enthymeme: Anthony is a profligate; therefore Anthony must be despised. Whoever has committed murder must die. The soul is indivisible, for it does not occupy any space; is an example of a contracted syllogism. T.).

III. Syllogisms of Judgment.

81.

Determining and Reflecting Judgment.

The faculty of Judgment is twofold; the determining and the reflecting. The former goes from the universal to the particular; the latter, from the particular to the universal: This is but of subjective validity; for the universal, to which it proceeds from the particular, is nothing but an empirical, a mere analogon of the logical, universality.

82.

Syllogisms of (the reflecting) Judgment.

They are certain argumentative modes of arriving at universal conceptions from particular ones. They therefore are functions not of the determining, but of the reflecting judgment; and consequently they determine not the object, but the way of thinking of it, in order to obtain the knowledge of it.

83.

The Principle of these Syllogisms.

The principle, in which the syllogisms of judgment are founded, is this, That many do not agree in one without a common ground, but that what belongs to many in this way is necessary on a common ground.

Scho. As the syllogisms of judgment bottom upon that principle, they cannot be held immediate ones.

84.

Induction and Analogy—the two Species of Syllogism of Judgment.

Judgment, whilst it proceeds from the particular to the general, in order to gather general judgments from experience, of course not *à priori*, infers either from many all things of a sort, or from many determinations and properties, in which things of the same sort agree, the others, provided that they pertain to the same principle. The former species of inference is named the syllogism by induction, the latter that according to analogy.

Scho. I. Induction then infers *à particulari ad universale* according to the principle of rendering (empirically) universal: What agrees to many things of a species, agrees to the rest too. Analogy infers the total from the particular resemblance of two things, according to the principle of specification: Things of a sort, of which we know many agreeing marks, agree in the other marks that we know in some things of this sort, but do not perceive in other things. Induction extends the empirically given from the particular to the universal with regard to many objects; analogy, on the other hand, the given properties of a thing to several of the very same thing. One in many, therefore in all: induction; many in one (that is in others too), therefore the rest in it: analogy. For example, the argument for immortality, from the complete unfolding of the predispositions of nature of every creature, is a syllogism according to analogy.

In the syllogism according to analogy, however, the identity of the ground (*per ratio*) is not required. We conclude according to analogy nothing but rational inhabitants of the moon, not men. And we cannot conclude according to analogy beyond the *tertium comparationis*.

2. Every syllogism of reason must yield necessity. Hence are induction and analogy not syllogisms of reason, but logical presumptions or empirical syllogisms; and by induction we obtain general, but not universal propositions.

3. These syllogisms of judgment are useful and indispensable for the purpose of enlarging our cognition of experience. But, as they afford empirical certainty only, we must use them with great caution.

85.

Simple and Compound Syllogisms of Reason.

A ratiocination when it consists of but one syllogism, is simple; when of several syllogisms, compound.*

86.

Polysyllogistic Ratiocination.

A compound syllogism, in which the various syllogisms are conjoined not by mere co-ordination, but by subordination, that is, as grounds and as consequences, is termed a concatination of syllogisms (*ratiocinatio polysyllogistica*).

87.

Prosyllogisms and Episyllogisms.

In the series of compound syllogisms we may argue in a twofold way, either from the grounds down to the consequences, or from these up to those. The former is done by episyllogisms; the latter, by prosyllogisms.

An episyllogism, in the series of syllogisms, is that syllogism, whose premiss is the conclusion of a prosyllogism,—of course of a syllogism, which has the premiss of the former for its conclusion.

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* A compound syllogism, whose premises are contracted syllogisms, goes under the denomination of Epichireme. T.

88.

Sorites.

A syllogism consisting of several abridged syllogisms producing one conclusion, is named a sorites (or heap), which may be either progressive, or regressive (Goclenian), accordingly as we ascend from the more proxime to the more remote grounds or descend from the more remote ones to the more proxime.

89.

Categorical and Hypothetical Sorites.

The progressive as well as the (retrograde or) regressive sorites may again be either categorical, or hypothetical. That consists of categorical propositions as a series of predicates; this, of hypothetical ones as a series of consequences.

90.

Fallacy. Paralogism. Sophism.

A syllogism, which, though it has the appearance of a right one for it, is false in point of form, is termed a fallacy. A syllogism of that nature, when one deceives himself with it, is a paralogism; and when he endeavours to deceive others with it, a sophism.*

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* There is, says Kant in the treatise aforementioned, yet another use of the syllogistic art: by means of it to puzzle the ques-

Scho. The ancients occupied themselves much about the art of framing sophisms. Hence are there many of them; for instance, the *sophisma figuræ dictionis,* in which the middle term is taken in a different sense; the *sophisma à dicto secundum quid ad dictum simpliciter,* wherein the necessary limitation is omitted; (the *fallacia accidentis,* in which one decides with regard to the essential properties of a subject according to something merely accidental; *sophisma ambiguitatis vel amphibolie,* by which four terms are concealed in a syllogism; *non causa pro causa,* or the assigning of a false cause (*post hoc, ergo propter hoc*); *sophisma sensus compositi et divisi,* or the falsifying of the context, when two expressions are used in a different signification; *sophisma ignorationis elenchi,* that is, mistaking the question, or the merely pretended contrary conclusion (*quiproquo*); *sophysma polyzeteseos,* or the insidious questioning; *sophisma heterozeteseos,* or the indifference obtained by importunity; and finally the assuming of a false argument (*sophisma falsii medii s. fallacia non causæ ut causæ*), wherein the consequence is faulty. T.).

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tion so as to get the better of the unwary in a learned contest. But, as this use belongs to the gymnastics of the learned (an art which may otherwise be very useful, but does not contribute much to the advantage of truth), I shall pass it by in silence. T.

91.

Leap in Syllogising.

A leap (*saltus*), in syllogising, or proving, is the conjunction of the one premiss with the conclusion, so that the other is left out. A leap of this sort, when any body may easily add the wanting premiss in thought, is regular (*legitimus*); but, when the subsumption is not clear, irregular (*illegitimus*). In it a remote mark is connected with a thing without an intermedial mark.

92.

Petitio Principii. Circulus in Probando.

By begging the question (*pet. prin.*) we understand assuming, for the purpose of an argument, a proposition as an immediately certain one, though it requires a proof. And one, when he lays the proposition, which he has a mind to prove, as a foundation to its own proof, is guilty of a circle in proving.

Scho. A circle in proving is often difficult to be detected; and this fault is usually committed the oftenest just when the proofs are difficult. (Would it not, for example, were the scriptures to be proved to be the word of God by the authority of the church, and the authority of the church to be proved by the scriptures as the word of God—be a glaring circle? T.).

minus probans.

much, as well as too lit-
case, proves a part only of
but, in the former, extends to

that proves too little may be true,
is not to be rejected. But, does it
much ? it proves more than is true; and
false. For instance, the proof against
'That whoever has not given life, cannot
it away,' proves too much; for, on this ground,
could not kill any animal. It is therefore false.

LOGIC

PART THE SECOND.

General Doctrine of Method.

94.

Manner and Method.

ALL cognition or knowledge and a whole of it must be conformable to a rule, (Want of rule is want of reason). And this rule is either that of manner (free), or that of method (coactive).

(Scholion. Manner (*modus aestheticus*) is, in propounding, that conjunction of one's thoughts, which has no other standard, than the feeling of the unity in the exhibition. T.).

95.

Form of Science. Method.

Cognition, as science, must be arranged after a method. For, as aforesaid, a science is a whole of cognition as a system and not merely as an aggregate. It therefore requires a cognition, which is systematical, consequently disposed according to digested rules.

96.

Doctrine of Method—its Object and its End.

As the doctrine of elements in logic has the elements and the conditions of the perfection of a cognition for its matter; the doctrine of method, as the other part of logic, has to treat of the form of a science in general, or of the way of proceeding in order to connect the multifarious of cognition in a science.

97.

Means of Promoting the logical Perfection of Cognition.

The doctrine of method must shew the way, in which we attain the perfection of cognition. Now the most essential logical perfections of cognition consist in its distinctness, its profundity and systematical order, so as to make up the whole of a science. The doctrine of method therefore has chiefly to point out the means, by which these perfections of cognition are promoted.

98.

Conditions of the Distinctness of Cognition.

The distinctness of cognitions and their conjunction in a systematical whole depend upon the distinctness of the conceptions with regard to what is contained as well in them as under them.

The distinct consciousness of the matter of conceptions is promoted by their exposition and their definition; the distinct consciousness of their sphere, on the contrary, by their logical division. We shall first handle the means of promoting the distinctness of conceptions with respect to their matter.

I. *Promotion of the logical Perfection of Cognition by the Definition, the Exposition, and the Description of Conceptions.*

99.

Definition.

A definition is a sufficiently distinct and adequate conception (*conceptus rei adequatus in minimis terminis; complete determinatus*).

Scho. A definition only is to be considered as a logically perfect conception; for in it the two most essential perfections of a conception, distinctness and the completeness and the precision in distinctness (the quantity of distinctness), are united.

100.

Analytic and Synthetic Definition.

All definitions are either analytical, or synthetical. The former are those of a given conception; the latter, those of a factitious one.

101.

Given and Factitious Conceptions à priori and à posteriori.

The given conceptions of an analytic definition are so either *à priori*, or *à posteriori*; and the factitious ones of a synthetic definition are so formed likewise.

102.

Synthetic Definitions by Exposition or by Construction.

The synthesis of the factitious conceptions, from which the synthetic definitions arise, is either that of exposition (of phenomena), or that of construction. The latter is the synthesis of conceptions arbitrarily formed, the former that of those formed empirically, that is, from given phenomena, as their matter (*conceptus factitii vel à priori vel per synthesin empiricam*). The mathematical conceptions are the arbitrariously formed ones.

Scho. All definitions of the mathematical conceptions and—if definitions could always have place in empirical conceptions—of the conceptions of experience must then be synthetically framed. For, as to the conceptions of the latter species, for example, the empirical conceptions of water, of fire, of air and such like, we have not to dissect what lies in them, but to learn to know by experience what belongs to them. All empirical conceptions must therefore be considered as factitious ones, but whose synthesis is empirical, not arbitrable.

103.

Impossibility of empirically synthetic Definitions.

As the synthesis of the empirical conceptions is not arbitrable, but empirical, and as such never can be complete (because we may discover more and more marks of a conception by experience), they cannot be defined.

Scho. None but the arbitrable conceptions then are capable of being defined. Such definitions of them as are not always possible, but necessary, and as must precede all that which is said by means of an arbitrable conception, might be named declarations, provided that we declare our thoughts by them or give an account of what we understand by a word. And that is the case with mathematicians.

104.

Analytical Definitions by the Dissection of Conceptions given à priori or à posteriori.

No given conceptions, whether given *à priori* or *à posteriori*, can be defined but by analysis. For given conceptions cannot be made distinct but when their marks are rendered successively clear. If all the marks of a given conception are rendered clear, the conception is completely distinct; and if it does not comprise too many marks, it is precise, and from this a definition of the conception arises.

Scho. As we cannot be certain by any trial whether we have exhausted all the marks of a given conception by a complete analysis, all analytic definitions are to be held uncertain.

105.

Expositions and Descriptions.

All conceptions therefore cannot be defined, nor must they be so.

There are approximations to the definition of certain conceptions, which approximations are partly expositions, partly descriptions.

The expounding of a conception consists in the coherent (successive) representation of its marks provided that they are found by analysis.

The description of a conception is its exposition, provided that it is not precise.

Scho. 1. We can expound either a conception, or experience. The former is done by analysis, the latter by synthesis.

2. Exposition therefore has not place but with regard to given conceptions, which are rendered distinct by it; thereby it is distinguished from de-

claration, which is a distinct representation of factitious conceptions.

2. As it is not always possible to make the analysis complete; and as a dissection in general must, ere it becomes complete, be incomplete; an incomplete exposition, as part of a definition, is a true and a useful exhibition of a conception. A definition here remains but the idea of a logical perfection which we must endeavour to reach.

3. Description cannot take place but with respect to conceptions empirically given. It has not any determinate rules and contains nothing but the materials for definition.

106.

Nominal and Real Definitions.

By mere nominal definitions we understand those definitions, which contain the signification that we have chosen to give a certain name arbitrarily, and which therefore denote nothing but the logical being of its object or serve merely to distinguish it from other objects. Real definitions, on the other hand, are those definitions, which suffice to the cognition of the object, in point of its internal determinations, as they shew the possibility of it (the object) from internal marks.

Scho. I. When a conception is internally sufficient to distinguish a thing, it certainly is so externally; but it, when not internally sufficient, may nevertheless be externally so in a certain reference, namely, in the comparison of the definite with other things. But the illimited external sufficiency is not possible without the internal.

2. Objects of experience admit of merely nominal definitions. The logical nominal definitions of given conceptions of the understanding are taken from an attribute or adjunct; the real definitions, again, from the essence of the thing; from the first ground of possibility. The latter therefore comprehend, what always belongs to a thing, its real essence. Merely negative definitions cannot be named real ones; because negative notes may, just as well as affirmative ones, serve for the distinction of a thing from other things, but cannot for the cognition of a thing as to its internal possibility.

In moral philosophy real definitions must always be sought for; and all our endeavours must be directed to that object. In the mathematics there are real definitions; for the definition of an arbitrable conception is always real.

3. A definition, when it gives a conception, by which the object can be exhibited *à priori* in the concrete is genetical; all the mathematical definitions are of this nature.

107.

Chief Requisites of Definition.

The essential and the universal requisites of the perfection of a definition in general, may be considered under the four main points of quantity, of quality, of relation, and of modality;

1, as to quantity, with regard to the sphere of a definition, a definition and a definite *(definitum)* must be alternate conceptions, and consequently a definition neither wider, nor narrower, than its definite;

2, as to quality, a definition must be an ample as well as a precise conception.

3, as to relation, a definition must not be tautological; that is, the marks of a definite must, as its grounds of cognition, be distinct from it; and finally,

4, as to modality, the marks must be necessary and therefore not such as are added by experience.

Scho. The condition, That the generic conception and the conception of the specific distinction *(genus and differentia specifica)** must make up the definition, holds but relatively to the nominal definitions in the comparison, and not to the real ones in the deduction.

108.

Rules for the Proving of Definitions.

In proving definitions four operations are to be performed; it must be investigated whether a definition,

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* The words, distinction and difference, are usually confounded, even in philosophical works. In a correct style however, the former is never used but when treating of the objects and of the operations of the understanding, the latter, but when of those of sense. T.

1, considered as a proposition, is true;

2, as a conception, distinct;

3, as a distinct conception, ample; and,

4, as an ample conception, determinate, that is, adequate to the thing itself.

109.

Rules for the Framing of Definitions.

The very same operations, which are requisite to the proving of definitions, are to be performed in the framing of them. To this end then 1, seek true propositions, 2, seek those, relatively to whose predicate we do not always presuppose the conception of the thing, 3, collect several of them and compare them with the conception of the thing itself, whether they be adequate; and 4 and finally, see whether the one mark does not lie in the other, or is not subordinated to it.

Scho. 1. It is hardly necessary to mention, that these rules hold relatively to analytical definitions only. As in that case we never can be certain of the analysis' having been complete, we must set forth a definition as an essay only, and but as if it were a definition. With this limitation we may use it as a distinct and a true conception and draw corollaries from its marks. We may say, That, to which the conception of the definite agrees, the definition agrees to; but, as the definition does not exhaust the whole definite, not conversely.

2. Using the conception of the definite in the definition; or laying the definite as a foundation in the definition, is defining by a circle (*circulus in definiendo*).

We now come to treat of the means of promoting the distinctness of conceptions with respect to their sphere.

II. *Promotion of the Perfection of Cognition by the logical Division of Conceptions.*

110.

Conception of the Logical Division.

Every conception contains under it a multifarious, provided that it is concordant; and provided that it is distinct also. The determination of a conception with regard to all the possible representations, which are contained under it with a proviso that they are opposed to one another, that is, distinct from one another, bears the name of the logical division of the conception. The superior conception is termed the divided conception (*divisum*), and the inferior conceptions are termed the members of division (*membra dividentia*)

Scho. 1. To dissect a conception and to divide it are therefore very distinct operations. By the dissection of a conception we see what is contained in it (by analysis); by the division we consider what is contained under it. In this case we divide the sphere of the conception, not the conception itself. The division is therefore so far from being a dissection of a conception, that the members of division rather contain more in them, than the divided conception.

2. We ascend from inferior to superior conceptions and may afterwards descend from these to inferior ones—by division.

111.

Universal Rules of the logical Division.

In every division of a conception care must be taken,

1, that the members of division exclude one another or be opposed to one another; that they,

2, rank under a superior conception *(conceptum communum)*, and that they,

3, collectively taken, make up the sphere of the divided conception or be equal to it.

Scho. The members of division must be separated from one another not by a mere contrary, but by a contradictory, opposition.

112.

Codivision and Subdivision.

The various divisions of a conception, which are made with various views, are distinguished by the name of codivisions; and the division of the members of division is denominated a subdivision.

Scho. 1. A subdivision may be continued to indefinite; but it may be comparatively finite. A codivision goes likewise to indefinite, especially in conceptions of experience; for who can exhaust all the relations of conceptions?

2. A codivision may be said to be a division according to the variety of the conceptions of the same object (the points of view), and a subdivision that of the point of view itself.

113.

Dichotomy and Polytomy.

A division into two members goes under the appellation of dichotomy; but it, when consisting of more than two, takes the name of polytomy.

Scho. I. All polytomy is empirical; dichotomy is the sole division according to principles *à priori*; by consequence the only primitive one. For the members of division must be opposed to one another and the contrary of every A is nothing more than *non* A.

2. Polytomy, as in it a knowledge of the object is requisite, cannot be taught in logic. But dichotomy requires the principle of contradiction only, without knowing the conception, which we have a mind to divide, as to the matter. Polytomy stands in need of intuition; either intuition *à priori*, as in

the mathematics (for example, the division of conic sections), or empirical intuition, as in the description of nature (physiography). Yet the division according to the principle of the synthesis *à priori* has Trichotomy; 1, the conception, as the condition, 2, the conditionate, and, 3, the deduction of the latter from the former.

114.

Various Divisions of Method.

As to method itself, in particular, in the elaboration and treatment of scientific cognition, there are several chief species of it, which we shall here adduce according to the following division:

115.

I. *Scientific or Popular Method.*

The scientific or scholastic method is distinguished from the popular in this, that it sets out from fundamental and elemental propositions; the latter, again, from usual and interesting ones. That aims at solidity or profundity, and therefore removes every thing foreign; this has entertainment in view.

Scho. These two methods then are distinguished as to the species, and not as to the mere propounding; and popularity in the method is consequently distinct from that in the propounding.

116.

2. *Systematical or Fragmentary Method.*

The systematical is opposed to the fragmentary or rhapsodistical method. When one has thought according to a method, and when his method is then expressed in the propounding and the transition from one proposition to another distinctly made and delivered, he has treated a cognition systematically. Whereas, though one has thought after a method, but not arranged the propounding methodically, such a method is rhapsodistical.

Schol. The systematical propounding is opposed to the fragmentary, just as the methodical is to the tumultuary. Who thinks methodically may propound either systematically, or in a fragmentary way. The propounding, externally fragmentary, but methodical in itself, is aphoristical.

117.

3. *Analytic or Synthetic Method.*

The analytic method is contradistinguished to the synthetic. That begins with the conditionate and the founded and proceeds to the principles (*à principiatis ad principia*); this, on the other hand, goes from the principles to the consequences or from the simple to the compound. The former may be denominated the regressive (retrograde), the latter the progressive, method.

Scho. The analytic method is usually named the heuristical or that of invention or discovery, and the synthetic that of instruction. To the end of popularity the analytic method is more adequate; but to that of the scientific and systematical elaboration of cognition the synthetic, more so.

118.

4. *Syllogistic or Tabellary Method.*

The former is that method, according to which a science is propounded in a series or concatenation of syllogisms. The latter, that, according to which a system that is already finished is exhibited in its whole cohesion.

119.

5. *Acroamatic or Erotematic Method.*

The method, when one teaches only, is acroamatical; but, when the questions too, erotematical. The latter may be divided into the dialogical or Socratical and catechetical, accordingly as the questions are directed either to the understanding, or merely to the memory.

Scho. One cannot teach erotematically but by the Socratic dialogue, in which both master and scholar must question and answer one another reciprocally; so that it seems in it as if the scholar were himself the master. This dialogue instructs by means of questions, by making the disciple acquainted with his own principles of reason, and by calling and fixing his attention to them. But one cannot teach by the common mode of catechising; he can only interrogate about that which he has taught acroamatically. Hence is the catechetic method adapted to empirical and historical knowledge only; but the dialogic, to cognitions of reason.

120.

Meditation.

By it reflection or methodical thinking or cogitation is understood. Meditation must accompany all reading as well as all learning; and to it it is requisite, that we should make previous inquiries, and then put our thoughts in order or methodize them, that is, conjoin them after a method.

APPENDIX.

A SKETCH OF THE *AUTHOR'S LIFE AND WRITINGS*

BY THE TRANSLATOR.

De mortuis nil nisi verum.

Emmanuel Kant was born in Koningsberg, the metropolis of the kingdom of Prussia, on the twenty-second day of April in the year one thousand seven hundred and twenty-three*; of low extraction; but his parents, though obscure, were both virtuous and industrious.

His father (descendent of a Scotch family that spell their name with a C) was a saddler in a very small way; our hero, consequently, not nursed in the silken lap of affluence, but himself the sole architect of his fortune.

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* See page xliii of the Preface to the second edition of his Criticism on pure Reason.

"Let high Birth triumph! What can be more great?
Nothing ——— but Merit in a low estate."

He was taught to read and to write at a free-school; received, at the expense of his maternal uncle, a shoemaker, the rudiments of his academical education at Frederic's College; and, in the year one thousand seven hundred and forty, went to the university in his native city, where he was entirely bred, and from which, as he in his Anthropology informs us, he never travelled farther than to Pillaw once by water.

The early part of his life, like that of the lives of most men of deep learning and abstract science, having been passed in hard study and close application, yields but few materials and little variety of incident for the biographer.

His was originally intended for the church, studied divinity accordingly, and took orders.

His regular academical course finished, he began the world as a private tutor in a clergyman's family, and was afterwards appointed a titular governor to count Kaiserlingk's children; for, as we have been told, he had not the care of any of them, though nobody could be more capable of forming tender minds, or of instilling into them the principles and the love of wisdom and of virtue. Yet "the greatest abilities are not only not required for this office, but render a man less fit for it."

As he was of a mild and amiable disposition, of equal temper or good-humour, modest, of great equanimity, affable, well-bred, or of polished manners, cheerful, an agreeable facetious companion, fond of conviviality, "of the feast of reason and of the flow of soul," and, from extensive reading and an uncommonly retentive memory, possessed of an inexhaustible fund of anecdote, the count and the countess, amiable, elegant in manners, cultivated and enlightened themselves, in whose society, as well as in that of modest women in general, he took great delight, were naturally desirous of his entertaining and instructive conversation, conceived a friendship for him, generously became his patrons, and gave him that sinecure, partly with a view of enjoying the pleasure of his excellent society (for Kant was the vital principle or the enlivener of every society), partly that he might have sufficient leisure to cultivate his rare talents, his extraordinarily active, vigorous, penetrating, and comprehensive mind.

And he did not eat the bread of idleness or bury his talent, but prosecuted his studies with unwearied attention and indefatigable diligence. Having sedulously gone over the whole circle of the sciences and made himself master of them all, he found the mathematics and pure philosophy (logic and metaphysic) the most congenial to his cast of mind, and gave up the profession of theology, as a sphere too confined for the active exertion of his mental energy, for his wide range and great depth of thought.

His custom was to employ the morning and forenoon in study and writing, to withdraw early in the evening from society, and to amuse himself for an hour or two in reading sometimes history, memoirs and travels, sometimes biography, voyages and poetry, now and then a play, by way of relaxation, and even a good novel, such as Sir Charles Grandison, a work which he often read and praised much. He had an exquisitely delicate and a very correct taste for the fine arts, but neither a turn nor leisure for the acquirement of superficial accomplishments.

In the year one thousand seven hundred and fifty-six he took the degree of Master of Arts,* opened a class, and gave public lectures on the mathematics, on logic, and on the metaphysics. His delivery was both easy and graceful; he possessed the art not only of commanding the attention of his auditors, but of impressing his doctrines deeply in their minds; and his lectures on moral philosophy and on moral religion in particular were highly interesting and sublime.

In that situation, however, he, for all his talents both natural and acquired, was long eclipsed by a man of very inferior parts, whose name does not deserve to be here mentioned. But Kant's time was not lost; for his talents were continually expanding themselves, and he was constantly ruminating on his new system. It was (to use a somewhat florid allegory) a solar eclipse. And he, like the sun, shone forth at last in his full meridian splendour. His opponents "hid their diminished heads," and their opinions and doctrines were dispersed, and vanished like vapour. He alone illuminates the world with his beneficent rays.

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* In Germany the degree of M. A. is a much greater dignity among the learned, than it is with us.

At length our philosopher was called to fill the chair of wisdom, a station which his superior abilities and talents had so long merited, and which he afterwards graced so much and dignified. He, in the year one thousand seven hundred and seventy, was created doctor and regius professor of pure philosophy in the university of Koningsberg.

And, in the year one thousand seven hundred and eighty-six, the Royal Academy of Sciences of Berlin chose him one of their members. They no doubt intended to confer a mark of honor on the professor; but it was soon found, that his being a fellow of their society, celebrated though it justly is, redounded to their honor.

Having now reached the summit of his ambition, and wishing for nothing more than leisure to digest his critical system, "to gain the heights of science and of virtue," he refused several places of emolument and other dignities that were offered him.

So early as the year seventeen hundred and forty-seven, he published his *coup d'essai*, THOUGHTS ON THE TRUE ESTIMATION OF THE LIVING POWERS; TOGETHER WITH A FEW OBSERVATIONS ON THE POWER OF

BODIES IN GENERAL; in which, he, by repudiating, at the age of four-and-twenty, the thoughts of these celebrated men, Leibnitz, Wolf, Bulfinger, the two Barnoullis, Herman and others, proves himself to be the most acute metaphysician and the ablest natural philosopher of his time. His motto is (from Seneca), *Nihil magis præstandum est quam ne pecorum ritu sequamur antecedentium gregem, pergentes, non qua eundum sed qua itur*.

No name, however famous, should it oppose the discovery of truth, is (says he) to be held of any value; the track of reason is the only one for us to follow in.

That invective and personal attacks are not Kant's weapons the reader will see from these his concluding words: I have succeeded in perceiving a few errors in Leibnitz's theory, it is true, yet I am one of this great man's debtors; for I should have effectuated nothing without the clue of the excellent law of continuity, for which we have this immortal discoverer to thank, and which is the only means of finding the way out of this labyrinth. In short, though the matter has fallen out in my favor, the share of honor that remains to me is so small, that I am not afraid of Ambition's demeaning herself so far as to grudge me it.

Both this work and his subsequent publications will shew, that the discovery of the latent truth after which the greatest masters of human knowledge sought long in vain has been reserved for him.

His GENERAL PHYSIOGONY AND THEORY OF THE HEAVENS, or an Essay on the Constitution of the mechanical Origin of the Universe according to Newton's Principles, appeared in the year one thousand seven hundred and fifty-five. In which work he evinces his profound astronomical knowledge, conjectures, with great probability, that there are beyond Saturn's orbit other planets more and more eccentric than Saturn, by consequence nearer and nearer the cometary property, and thus foretells, on theoretical grounds, what Herschel discovered six-and-twenty years after with the assistance of the telescope, the existence of Uranus (the Georgian planet or Herschel) and its satellites. Kant's theory with regard to Saturn's ring too is confirmed by Herschel's recent discoveries.

It cannot but be interesting to men of science to compare the construction of the heavens, which one great man has perceived, so to say, with the telescopic eye of his mind, according to the Newtonian laws from the original birth of the celestial bodies, with the construction of the heavens as another great man has exhibited it according to telescopic observations.

This publication, being rather dry and abstruse, was but little known at first; the celebrated Lambert is accused of having taken advantage of this circumstance; and that not without reason; for the very same theory of the systematical constitution of the universe, of the galaxy, of the nebule, &c. is advanced in his Cosmological Letters, which he published in the year seventeen hundred and sixty-one, and with which he made so great a figure.

Kant himself, in one of his works, says, that the agreement of the thoughts of this ingenious man with those which I communicated to the public sixteen years ago, which agreement is to be perceived in the very smallest strokes, increases my presumption, that this delineation will hereafter receive more confirmation." *Sic redit ad dominum*, &c.

In the year one thousand seven hundred and sixty-three he presented the public with THE ONLY POSSIBLE ARGUMENT FOR THE DEMONSTRATION OF THE EXISTENCE OF GOD. In this treatise, which is one of his dogmatical works (for even Kant was only a dogmatist till he reached the transcendental station in his later work, CRITICISM ON PURE REASON); in this extremely recondite treatise, wherein nothing but an argument (or ground of proof) in support of the demonstration of the existence of the Deity is pretended to, the greatest acuteness or subtility, and all that which is possible to be performed by mere conceptions and by the theoretical mode of proof of the existence of that Being, will be found; in which speculative field nothing apodictically certain on this head can possibly be contained.

He here does not allow but of the possibility of two methods of proof of the existence of the All sufficient Being, the Ontological and the cosmological. When logical exactness and completeness are in hand, the former mode of proof is the better; but, when comprehension to the common just conception, liveliness of impression, beauty, and the power of moving the moral springs of human nature are so, the preference is to be granted the latter.

But, as that proof is not to be found in this unbeaten path (the theoretical or speculative field), we must turn to the broad highway of practical reason, or, in other words, have recourse to the moral argument; for, as God is a moral being, the proof of his existence can only be a moral one. Though it is absolutely necessary to convince one's self of His existence, it is not equally necessary, that it should be demonstrated. Indeed it is not, for want of intuitive data, susceptible of that strictness which is requisite to the evidence of mathematical demonstration. Nor can it by any effort of the speculative use of our reason be confuted neither.

The teteological contemplations interspersed in this work are highly interesting and edifying, and have a great tendency to corroborate (the minds of men in general) in the belief in the Eternal Being. Kant's later doctrine and more profound sentiments on this the most important of all subjects are to be found in the aforementioned Criticism and in his other systematical works, wherein he, by rendering essential service to moral science, to the true enlightening of the human mind, and by consequence to the cause of truth and of virtue, proves himself a great benefactor to mankind.

He, in the year seventeen hundred and seventy, excited the attention of the thinking part of the public by his inaugural dissertation, DE MUNDI SENSIBILIS ATQUE INTELLIGIBILIS FORMA ET PRINCIPIIS; the most remarkable phenomenon in the philosophic hemisphere since Newton's PHILOSOPHIÆ NATURALIS PRINCIPIA MATHEMATICA. It may be said, with great truth, that, in this work of Kant, which comprises the creative architectoric idea and complete foundation of his future system, the profundity of a Newton, the acumen of a Leibnitz, the solid argumentation of a Hume, and the systematic arrangement of a Wolf conspire to render it perfect. It alone entitles his statue to distinguished niches in the temples of Science and of Fame. "Others are fond of Fame, but Fame is fond of him."

He had attained the age of fifty-eight ere his CRITICISM ON PURE REASON made its first appearance in the year one thousand seven hundred and eighty-one. This, the most abstract profound metaphysical work that ever was written, and which the Germans, by way of eminence, name, The Criticism, is unquestionably the triumph of intellect. It comprehends, in one octavo volume of eight hundred and eighty-four close-printed pages, his whole theoretical system, the complete investigation of the procedure of the sensitive faculty, of the understanding, and of the faculty of reason itself.

In it the wings of all false speculative philosophy that attempts to soar above the sphere of possible experience are effectually clipped. In it the doctrines of materialism, of atheism, of free thinking incredulity, and of unthinking superstition, all of which may be universally pernicious to society, as well as those of idealism and of scepticism, which are dangerous more especially to the schools and can hardly be ever communicated to the public in general, are quite overthrown.

This single publication, abstracting from his other works (Metaphysic of Morals; Criticism on Judgment; Criticism on practical Reason; &c.; all masterpieces), distinguishes this perspicacious metaphysician and subtile philosophical critic as both the ornament of his native country, and the pride of the republic of letters.* And history informs us, that Nature, though bountiful to the human race, is not so lavish of her favors, as to produce a man of such supereminence of mental powers every century.

His METAPHYSICAL ELEMENTS OF THE PHYSICS were published in the year seventeen hundred and eighty-six. They contain the pure principles of Somatology. The metaphysic of corporeal nature is first treated of; then the mathematics are applied to the doctrine of bodies, which cannot become natural philosophy but by them. In this inimitable treatise he has fully exhausted the subject of the metaphysical somatology.

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* The late professor Beck of Rostock informed me, that Kant had made himself so much master of his subject before he printed this Criticism, that he neither corrected nor transcribed the manuscript of it, but sent it sheet by sheet as he wrote it to the press.

The table of the categories (not those of Aristotle, that trifling puerile enumeration of predicates,* but his own) he has used as the only scheme for the completeness of a metaphysical system.

He has reduced these (what he with modesty names) elements to four heads: under the first of which, motion, as a pure quantum, is considered as to its composition, without any quality of what is moveable, and this head is denominated Phoronomy; under the second it (motion), as belonging to the quality of matter, is considered under the name of an originally motive power, and hence is this head distinguished by the appellation of Dynamics; under the third, matter with that quality is considered by its own motion in relation to itself, and this head is termed the Mechanics; and under the fourth, the motion or the rest of matter is determined merely with reference to the mode of representation, or modality, and the title of this head is Phenomenology.

On this great work, perhaps the most profound of all his works, none but men of science, of deep science, and the few who reason, can venture to pronounce; to all others it will seem a mere gallimatia. This little octavo book of but one hundred and fifty-eight pages proves its eminent author to be the only man that ever possessed mathematical and metaphysical knowledge united in the highest degree, and that ever discursively reflected (philosophised) profoundly on the mathesis.

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* *Amicus Aristoteles, sed magis amica veritas.*

And thus much as to the first writings of this prince of mathematicians and of philosophers. A complete description or review of all his systematical works would alone fill a thick volume. But what has been here said may suffice to shew, that they are extant in Germany, and, it is to be hoped, will induce those, who do not think themselves already too knowing to stand in need of more knowledge, to study them. The task indeed is not easy, but it will reward the labour abundantly.*

Kant is the founder of the CRITICAL PHILOSOPHY, so named to distinguish it from other systems or modes of philosophising, till it shall be universally allowed, that there cannot be but one (true) philosophy. As this vast system, the rich harvest of the constant study, reflection, meditation, and Herculean labour of some fifty years, and which embraces the whole sphere of philosophy, is now taught in all the protestant universities of Germany, and but

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[*] To study this system effectually, it may be advisable to follow the plan, which Descartes holds so indispensable to the attaining of right insights, and which is this: To forget, during the study of a new doctrine, all the conceptions that one may have formerly acquired relatively to the same subject, and to set out on the road of truth without any guide but mere sane reason.

little known yet in Great Britain and Ireland, it cannot be improper to give a slight conception of it in this place.

It is, then, a new method of philosophising, which, distinct from all former methods, is founded in a most accurate dissection of the whole faculty of cognition, determining the utmost bounds of this faculty, and denominated TRANSCENDENTAL PHILOSOPHY; from which mental anatomy all true philosophy must set out.

This modern method of philosophising has quite choked the weeds of all former systems and (to continue the figure) cleaned the ground of intellectual research. This assertion may seem somewhat exaggerated to those not much conversant in such perquisitions as these; but the destruction of all false systems is infallibly accomplished by just reasoning founded in an accurate and a deep philosophy of mind.

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[*] It is interesting to know, that Hume's hint relative to the conception of the connexion of cause and of effect was what first roused Kant from what he calls a dogmatic slumber of many years, and gave occasion to this total reform in philosophy, by means of which reform that celebrated man's doubt, up which neither Reid, nor Beattie, nor Oswald, nor Priestly, nor any of their followers, could ever throw the least light, is fully resolved; not however with the aid of common-sense that they extol so much, but with that of pure reason after the method of the critical philosophising.

Whoever reads Kant's transcendental philosophy, (contained in his Prolegomena to the Metaphysics*. and in his Criticism on pure Reason) with the requisite degree of attention and of reflection must allow, that his reputation of being the ablest anatomist that ever dissected the human mind is firmly established. He seems even to have fully exhausted his subject, and left nothing material for us to do, but to read, to understand, to admire, and to be grateful for his inestimably precious labours.

This profound transcendental philosophy is not only the most sublime, but the most useful of all sciences. Were it not laid as a foundation, no metaphysic at all were possible, we could recur to nothing for first principles, never reach, in the philosophic field, beyond empirical science, which, like the bust in La Fontaine's fable, has a fine head, but no brains.

It is however the most difficult and the most abstract of all science; for what can be more so, than the reflex act of the mind, the turning of the intellectual eye inwards on its own operations? A little learning is a dangerous thing; drink deep or taste not of the Pierian spring. There shallow draughts intoxicate the brain, and drinking deep sobers us again.

Beautifully and justly said by Pope; for superficial knowledge elates or puffs up, but profound (by shewing the very limited stretch of our faculties, and that the most cultivated reason cannot, with regard to the essential ends of humanity, advance a single step farther, than the most common understanding) abates our pride or arrogance, and teaches us modesty and humility.

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* Translated into English by the author of this Sketch, and will soon be published.

In this admirable system (in his Criticism on Judgment) quite a new theory of taste, of the beautiful, and of the sublime, of both nature and art, is advanced; and the doctrine of teleology, or of philosophical ends, handled after the most masterly method.

In the Groundwork for the Metaphysic of Morals, the Criticism on practical Reason, and the Metaphysic of Morals, he treats of his system of moral philosophy which he divides into ethics and law, and is the first that lays down pure principles of morality.

In those incomparable works it is clearly evinced, that the Heteronomy of the arbitrament (that is, the dependence upon laws of nature, to follow some one incentive or inclination, when the will gives itself not the law, but the direction for the rational observance of pathological laws) never can comprise the universally legislative form, and not only cannot be the basis of any obligation, but is, though the action, which results from the maxim of heteronomy, should be legal, even contrary to the principle of pure practical reason, consequently to the moral mindedness.

All the matter of practical rules ever depends upon subjective conditions, which yield it nothing but a conditional universality for rational beings, and all those conditions turn on the pivot of the principle of one's own happiness. The principle of happiness may afford maxims, but, even were the universal happiness the object, never can such ones, as are fit for laws of the will.

All the possible determinatives of the will are either merely subjective, and therefore empirical, or objective and rational; either external, or internal.

The following are all principles of heteronomy: education (according to Montaigne), the constitution (after Mandeville), the physical sense (according to Epicurus), the moral sense (after Hutcheson), perfection (according to the Stoics and Wolf,) and the will of the Deity (after Crusius and other theological moralists). All material principles are totally unfit for the supreme moral law.

In the aforementioned works it is likewise proved, that the Autonomy (the universal self-legislation) of the will is the only principle of all moral laws and of the duties suitable to them. The maxim of self-love (prudence) advises merely; but the law of morality commands. Is there not however a great distinction between what is advisable for us to do, and what we are obliged to do? It is difficult and requires a knowledge of the world to know how to act on the principle of heteronomy; but quite easy to the most common understanding to know how to act on that of autonomy. In a word, The formal practical principle of pure reason is the only possible principle fit for practical laws (which make a duty of actions) and for the principle of morality in general.*

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* This new system, which is really the victory of human reason, the author of this Sketch takes the liberty of recommending once more to the notice of the learned.—In a political point of view our insular situation is highly advantageous to us, but in a literary and scientific one, very hurtful. This, however, were our literati less supine, not (what foreigners perhaps not unjustly accuse them of being) so proud, and less national, might be obviated. Does not the commonwealth of learning embrace the whole world? Whatever conquests are made in the kingdom of truth, they belong to humanity in general. The Germans are as well acquainted with our literature as we ourselves, and do it the justice to admire it. But it is not so with us; we in general know but little of theirs, and are totally ignorant of their best philosophical works. For, unfortunately, nothing but the very refuse of the productions of the German press, with a few exceptions, is transplanted to our island. Formerly publishers and printers were men of letters, could judge for themselves, and were interested in science. It were well worth a British philosopher's while to learn German for the sole purpose of studying the critical philosophy; for that language, as it is a key to more science than either Greek or Latin, would certainly repay him fully for his time and labour. Mean-while, if I am fortunate enough to be instrumental towards transplanting the genuine seeds of that philosophy to this country, I shall enjoy the consciousness of contributing essentially to the dissemination of real science, and therefore of not

And in The Religion within the Bounds of bare Reason, a signally sublime publication, there is taught a purified philosophical doctrine worthy of the notice of enlightened rational beings. Kant, in this work, shews, that the New Testament, explained agreeably to established moral principles, contains a pure moral religion. No other can possibly stand the test of time or have a right to have its issue in the catholic or universal religion of man. Nothing but ignorance or monkish superstition can furnish confessors in the cause of any other form of belief; and this none but those influenced by selfish views and sectaries and bigots, or blind zealots, who are all deaf, or unwilling to listen, to the sacred dictates of reason or obligations of morality, can possibly deny.

Many divines by profession and all theological moralists, as they are heteronomists, make a use of reason that perverts it, and thereby, though not intentionally, subvert morality.* But the author of

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having travelled in vain or of not being altogether a passive or useless member of society.

* By theological moralists we understand those who, previously assuming the existence of God, derive the moral law immediately from his will; by which procedure the universal self-legislative power of pure practical reason is quite destroyed. The moral theologist, on the other hand, on its indispensable condition, liberty, unfolds the moral law out of the universal reason of man, and postulates God and immortality as abso-

the great work under review distinguishes himself as not only a strict autonomist but a pure rationalist in matters of belief, or a moral theologist, and as the justest and most profound reasoner, as well as the most consequential and systematical writer of any of those, who have ever treated of the subjects of morality and of religion.

The critical philosophy perhaps has had more expositors, commentators, and epitomists during the space of twenty years, than the Platonic and the Aristotelian systems united have had during many centuries. It unquestionably fixes a grand epoch in both the annals of science and the history of the progress of the human understanding. And every unprejudiced and competent judge will join us with pleasure in paying this grateful tribute of praise (that "envy dare not flattery call") to the manes of the matchless founder of this noble system: That he, being undoubtedly the father of metaphysic as a science, and the discoverer as well as the first teacher of the doctrine of pure morality, and as no other man ever left posterity so valuable a legacy,

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lutely necessary conditions of the possibility of its fulfilment. The Ethics do not extend beyond the reciprocal duties of man and subsist by themselves even without the idea of the Supreme Being, but infallibly lead to, the very sublimation of morality. Religion, whose essence, subjectively considered, consists in the maxim of discharging our moral duties as Divine commandments, and which crowns all morality.

has a just right to be held the luminary of the learned world, and to bear the palm of science unrivalled perhaps for ever.

If it is a fact, that, objectively considered, there cannot be but one (true) philosophy, and it is a stubborn fact, that Kant's method of critical philosophising has totally overthrown all former philosophical systems, can any one, unacquainted with it, venture to dignify himself with the title of philosopher, in the proper sense of the word? If he presumes so to do, it must be through a happy ignorance indeed, and an overweening self-flattery. "Seest thou a man wise in his own conceit? There is more hope of a fool, than of him."

From what has already been said of Kant's temper or disposition of mind it may be easily gathered, that he, as to his manners or behaviour, was by no means a cynic, or a snarling churlish teacher of virtue, and, though he was in some essential points a stoic, had not the least taint of severity or moroseness. The austerity of the anachorite was not an ingredient in his composition, and he neither lived in a tub like the currish Diogenes, nor secluded himself from the world like a torpid monk, but habitually frequented the best company, of which he was the very soul, and well aware, that "happiness and

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* The Cynics, or the followers of Diogenes, derived their name from the suburb of Athens called the Cynosarges, in which they taught.

true philosophy are of the social still, and smiling kind." Besides, he was constantly visited by all persons of rank, by all travellers of distinction, as well as by all men of eminence in every line, whose admiration he, by his hospitality, by his great knowledge of the world, and by his rich and edifying conversation on every topic, never failed to excite, from whom he always received the tribute of due esteem, and who were all proud of having had an opportunity of seeing and of conversing with so distinguished a character.

That our sublime master could sometimes unbend his mind in writing too, the following is a specimen: That the husband is destined to rule and the wife to obey, we, were it not sufficiently pointed out by nature, have St. Paul's authority for maintaining. I, says Kant, in one of his miscellaneous works, would, in the language of gallantry (yet not without truth), say, that the wife should rule and the husband govern. The conduct of the husband must shew, that he has the welfare of his wife above all things at heart. But, as he must know the situation of his affairs better, and how much money he can afford to spend, he, like a dutiful minister, first complies with the orders of his monarch, who thinks of nothing but pleasure and perhaps wishes to build a palace; only that at present there is no money in the treasury, that certain more pressing wants must be supplied, &c.; so that her majesty may do whatever she pleases, but on this condition only, that her minister shall furnish her with the means.

And this biographical incident, as it evinces a noble independence of spirit, as well as a manly and inflexible firmness of mind that characterises the practical philosopher, and betrays a zealous champion in the cause of truth, morality, and religion, we conceive, deserves to be here recorded: The present king of Prussia's father and predecessor, by the instigation of a clerical hypocrite, sent for Kant, and desired, that he would retract some sentiments expressed in his work on moral religion.— Your majesty (answers he) may dispose of my person as you please. I am your majesty's faithful, obedient, respectful, and dutiful subject and servant. But no power on earth can control my thoughts or has a right to compel me to recant a single sentiment on any subject that flows from my reason or to deny or even but to conceal what I deem truth.—To the honor of the absolute monarch be it related, No farther interruption was ever given to the free publication of all the works of the Prussian Socrates.

His having led a single life adds another illustrious instance to lord Verulam's remark relative to bachelors: Certainly the best works, and those of greatest merit for the public, have proceeded from the unmarried or childless men. All Kant's pursuits were obviously of a métaphysical or intellectual nature. He devoted himself to the sciences entirely and to literature. But we, even in this light Sketch, have had a proof of his having made his more particular addresses to Philosophy, "the fair," whom he certainly has elevated to the very throne of reason.

Notwithstanding a very delicate constitutional frame of body (for he was by no means gifted with corporal qualities as with those of the mind),* and a life passed in laborious study and intense meditation, he, by means of going to bed early, and of rising betimes, of constant occupation, of temperance,† of regular exercise on foot, of tranquillity of mind, and of cheerful society, retained the use of his mental faculties, his intellectual activity and vigour, almost unimpaired till the age of seventy, and had attained the advanced period of life of eighty years and upwards before he, on the twelfth day of February in the year one thousand eight hundred and four, was seized with an apoplexy that occasioned his speedy dissolution, and numbered his freed spirit with the purified spirits that live for ever.

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* He was of a little stature, his thorax or chest so narrow as scarce to leave room for the play of his lungs, and, when walking alone, in a thoughtful mood, stooped very much, especially in the decline of life.—The portrait sketched by Hopwood, which is the frontispiece to this work, is the copy of an engraving by Lips of Weimar from an original painting, a striking likeness of Kant at the age of seventy-one, by Wernet of Berlin.

† The only circumstance peculiar to Kant's diet, is, that he made but one meal a day, his dinner; a habit, which, by the way, we do not think conducive to longevity.

While Kant stood upon the verge of this world, Death, that king of terrors to the guilty, was not armed with any thing terrific, but the prince of peace, to him. He made the awful transition from time to eternity, from this corporeal earthly scene to the intelligible world, with philosophical serenity or composure of mind, with the dignity peculiar to a wise man, with the calmness, fortitude and resignation of a virtuous mind deeply penetrated with a firm belief of reason in the Supreme Intelligence, and in a future state, the life spiritual, or the prolongation of our moral existence to infinite. "Virtue alone has majesty in death."

On that melancholy occasion, the whole city of Koningsberg, lamenting the decease of so excellent a man, by which they conceived that they sustained a national and an irreparable loss, went into deep mourning, and people of all ranks and of all ages in town and from the neighbourhood, bewailing this sad catastrophe and with settled sorrow in their countenances, flocked promiscuously to his interment, which was more like the pompous sepulture of a proud emperor, than the plain funeral of an humble philosopher.

Soon after that mournful event, a fine medal in honor of his great worth and uncommon endowments was struck in Berlin; it has on the one side his image and name with the year of his nativity, and on the reverse Pallas is represented sitting and holding an owl in her right hand, with this motto, *Altius volantem arcuit*; an allegorical designation of his having marked out proper boundaries to the field of empirical science, determined the sphere of speculative philosophy, or restrained the merely speculative use of reason to the objects of possible experience.

> ——" What boots it o'er thy hallow'd dust
> To heap the graven pile or laurel'd bust?
> Since by thy hands, already rais'd on high,
> We see a fabric tow'ring to the sky."

The true criticism on his moral character, as well as the most sublime panegyric that can be made on him, is, That he earnestly and stedfastly endeavoured to practise what he professed, to make the moral law, the great comprehensive rule of duty, the spring of his actions. For, his life was, so to say, a comment or illustration to his pure doctrine, and almost exemplified it, or was led as nearly up to it, consequently he, by precept and by example, came as near the idea of a sage, or of a perfectly wise and virtuous man, as perhaps the frailty inherent in the human nature allows. So that he gives us a conspicuous proof of the feasibility of acting (as far perhaps as a mortal is capable of acting) on pure moral principle; by his active, useful, and immaculate life he teaches us how to live, by his invaluable instruction and moral lessons how to grow wiser and better, and by his memorable death how to die. *Quid virtus et quid sapientia possit, utile proposuit nobis exemplar Kanten.*

The way to excel unquestionably is, *optima quæque exempla et imitandum proponere,* yet it, in strict propriety, is not the conduct of any man, how good soever it may be, but the moral law itself by which we should strive to direct our actions or to regulate our lives. Not the conduct of man as it is, therefore, but the idea of what it ought to be, can be a pattern for imitation, or set up as the standard of moral judgment or comparison.

But, as we in general are neither so good nor so bad as our friends or our enemies usually represent us, as the virtue or moral goodness of the best of us is but relative, for absolute perfection does not fall to the lot of man in this transitory life; as no human portrait can be painted without some shade, we have made every possible inquiry among those envious of Kant's well-earned fame and "hating that excellence they cannot reach," (for he had no other enemies, but was esteemed and beloved by every body who was acquainted with him) to find out a spot in his reputation, or character in the opinion of the world, and all that they can lay to his charge is, that his economy bordered on avarice, or sordid parsimony. But even this imputation his friends deny, say it is an aspersion, and maintain, that his rigid frugality or strict economy in early life was the effect of urgent necessity, but that, at a later period, he, when possessed of the means, did not suffer his increase of fortune to contract or to harden his heart (for an ample fortune is sometimes apt to contract and to harden the heart), but, so far from wanting brotherly love, was generous on proper occasions, beneficent to the honest industrious poor, not however "before men, to be seen," out of vanity or ostentation, but from a sense or motive of duty, bestowed his charity in private, "denied them nothing but his name," and that his principles were not only laid down in his head, but written and settled in his heart. For, as he was a man of a good heart, his benevolence was active, and his sympathy or fellow-feeling warm, but always regulated or governed by his understanding, always ruled by his reason, which superior faculty it was the study of his whole life to cultivate, and to exercise freely on all subjects and on all occasions, to the utmost of his power. *O Virum Sapientia sua simplicem, et Simplicitate sua sapientem! O Virum utilem sibi, suis, Reipublicæ, et humano Generi!*

In fine, it is easy to foretell, that a grateful posterity, edified and enlightened by the critical philosophy, and not biassed by the jealousy or rivalry but too prevalent among contemporary authors, will, when Kant's illiberal opponents and their superficial writings shall be buried in utter oblivion, and time shall have allayed envy, embalm him in their remembrance, and, actuated by a generous emulation only, not fail of acknowledging his great merit, of doing his invaluable works full justice, and of bearing his memory due respect.

THE END.

ERRATA.

P. 10 l. 30 *after* faculty *insert* T. —p. 12 l. 29 *after* as it, *insert* as—p. 16 l. 22 *read* Logic is a science of reason not as to the mere form, but the matter;—l. 28 and 29 *for* on *read* according to—p. 30 l. 22 and 23 there should not be a paragraph—p. 34 l. 24 *read* Pherecydes of Syros—p. 38 l. 7 *read* στοα—p. 48 l. 10 *after* general *insert a* comma—p. 58 l. 18 *after* methods *insert a* comma—l. 24. *after* genius *insert a* comma —p. 59 l. 7 *after* branch *insert a* comma—p. 73 l. 29 *read* which *and erase the* comma *after* of—p. 76 l. 14 *for* is *read* are—p. 85 l. 25 *after* both *insert* of—p. 93 l. 28 *read* presagement—p. 94 l. 15 *after* rest *insert* in this—p. 100 l. 30 *read* perspecting—p. 108 l. 10 *read* prejudices—p. 117 l. 23 *after* ourselves *insert* distinctly—p. 125 l. 5 *insert a star after* Conceptions—p. 132 l. 17 *read* abstract—p. 133 l. 19 *erase the* comma *after* being—p. 135 l. 8. *erase the* comma *after* distinguished—p. 162 l. 5 *after* in *insert* in—p. 174 l. 1 *read* the subject (in the conclusion)—p. 177 l. 9 *after* him; *insert* T.)——p. 212 l. 17 *for* the *read* he—p. 216 l. 17 *for* His *read* He—p. 204 l. 24 *after* concrete *insert a* comma—p. 205 l. 9 *after* conception *insert a* semicolon—l. 11 *after* tautological *insert a* comma—p. 206 l. 17 *for* be *read* are—p. 222 l. 23 *read* subtilty—l. 30 *read* All-suffi—p. 223 l. 1 *after* Being *insert a* colon *and read* Cosmological—p. 244 l. 11 *read* Kant's—p. 228 l. 4 *read* Bernouillis—l. 9 *insert a* comma *after* eundum—p. 222 l. 10 *after* dominum *dele the* comma—p. 240 l. 9 *after* hands *dele the* comma—p. 233 l. 27 *after* hand, *read* unfolds the moral law, on its indispensable condition, liberty, out &c.—p. 234 l. 24 *after* man *insert a* comma—p. 183 l. 16 *read* Kaims'—

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